



Submitted via www.regulations.gov and by email to A-and-RDocket@epamail.epa.gov

January 28, 2014

Air and Radiation Docket
Environmental Protection Agency
Mailcode 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: 2014 Standards for the Renewable Fuel Standard Program
Docket ID No. EPA-HQ-OAR-2013-0479

Waiver Request for the 2014 Renewable Fuel Standards
Docket ID No. EPA-HQ-OAR-2013-0747

The American Petroleum Institute (API)¹ and the American Fuel & Petrochemical Manufacturers (AFPM)² submit the following comments to the recently published Proposed Rulemaking on the 2014 Standards for the Renewable Fuel Standard Program. We are also submitting the same comment document to the docket for the Waiver Request for the 2014 Renewable Fuel Standards.

AFPM and API are commenting on behalf of America's refining industry, which is a strategic and valuable asset. The industry supports more than 500,000 jobs and contributes 1.9% to GDP. It provides the U.S. with secure supplies of domestic fuel products, with nearly 90% of U.S. gasoline consumption currently refined in the U.S. As manufacturers of liquid transportation fuels, as well as producers and importers of renewable fuels, AFPM and API members are directly regulated by the Proposed Rule. AFPM and API members are also impacted on a competitive basis, as the 2014 Renewable Fuel Standards will influence the demand for transportation fuels.

The proposed rulemaking covers multiple issues related to the Renewable Fuel Standard (RFS) program and to the Petition for a Partial RFS Mandate Waiver, submitted by API and AFPM on August 13, 2013

¹ API is the national trade association representing all segments of the U.S. oil and natural gas industry. Its more than 500 members – including large integrated companies, exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms – provide most of the nation's energy. Since 2000, the industry has invested over \$2 trillion in U.S. capital projects to advance all forms of energy, including alternatives.

² The American Fuel & Petrochemical Manufacturers ("AFPM") is a national trade association representing virtually all U.S. refiners and petrochemical manufacturers. AFPM's refinery members operate 122 U.S. refineries comprising approximately 98% of U.S. refining capacity.

(waiver petition). We provide a summary of our comments below. Our detailed comments on the entire NPRM and on the 2014 RFS waiver petition are presented in the attached report.

EPA's statutory RFS waiver authority. EPA is proposing to reduce the 2014 statutory volumes of advanced and total renewable fuel using a combination of the Agency's authority under two separate provisions – the cellulosic waiver provision and the general waiver provision. EPA's exercise of these waiver authorities is consistent with the plain language of the law and is entirely reasonable. EPA can waive the RFS mandates, under Section 211(o)(7) of the Clean Air Act, in whole or in part, where there would be *either*: (1) an inadequate domestic supply; *or* (2) severe adverse consequences to the economy of a state, a region or the United States. As the AFPM/API waiver petition demonstrates, the inadequate supply and severe economic consequences projected to occur in 2014 independently establish *both* grounds for a waiver.

- **Volumes of renewable fuels in 2014.** We agree with EPA's consideration of the limitations of the blendwall in setting the standards. We further recommend that EPA use its waiver authority and promulgate volume standards for 2014 as outlined in our waiver petition.

Regarding EPA's proposed new framework for setting annual standards based on Monte Carlo simulations, we identified several shortcomings in the analysis. For example, the forecast of cellulosic biofuel production for 2014 is overly optimistic. We recommend that EPA set the cellulosic standard as an annualized volume based on the most recent three months of cellulosic production. EPA should address these issues before finalizing this methodology.

Finally, EPA is correct at setting the biomass-based diesel standard at 1.28 billion gallons for 2014 and 2015, because the RFS statute prevents EPA from increasing this standard prior to 2016.

- **Percentage standards in 2014.** EPA's calculation of the 2014 compliance percentages is based on a diesel fuel demand forecast that is too low. The volume projections for gasoline, diesel, and renewable fuels used in the calculation of the percentage standards should be based on an EIA forecast from October, 2013 that has not yet been provided.
- **Rulemaking process.** EPA overlooks the statutory schedule and EIA's central role in providing timely estimates for calculating the annual percentage standards. EPA has provided no explanation for this deviation.
- **RFS in 2015 and beyond.** EPA should continue to use their waiver authority, as proposed in 2014, to reduce the statutory volumes in recognition of the blendwall. EPA should meet the statutory requirement to use EIA data from October 31 and to issue annual standards by November 30 prior to each compliance year. Once the statutory waiver triggers (50% in a single



year, 20% in two consecutive years) have been reached, EPA should take a comprehensive approach toward resetting the all renewable standards tables.

- **Rescission of 2011 cellulosic biofuel standard.** AFPM and API support EPA's proposal to grant their petitions for reconsideration, rescind the 2011 cellulosic biofuel mandate, and refund the money paid by obligated parties to purchase cellulosic waiver credits.

In conclusion, EPA's action to waive the RFS volume standards is appropriate and necessary. To fully address the problems with the ethanol blendwall, EPA should finalize the 2014 RFS volume standards as AFPM and API presented in our waiver petition. The waiver petition accurately describes the significant economic harm that would result if the blendwall issue is not addressed. By finalizing the volume standards as proposed in our waiver petition, EPA would be meeting the intent of Congress in adjusting the RFS requirements to avoid severe economic harm and inadequate domestic supply.

We would be happy to meet with EPA to discuss our comments in more detail. If you have specific questions concerning these comments, please contact Bob Greco, API's Downstream Group Director, at (202) 682-8167, or Rich Moskowitz, AFPM's General Counsel, at (202) 552-8474.

Sincerely,

A handwritten signature in black ink that reads "Robert L. Greco, III". The signature is written in a cursive style with a small circular mark at the end.

Robert L. Greco, III
Group Director, Downstream & Industry Operations
American Petroleum Institute

A handwritten signature in blue ink that reads "Richard Moskowitz". The signature is written in a cursive style.

Richard Moskowitz
General Counsel
American Fuel & Petrochemical Manufacturers



**COMMENTS OF THE
AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS
AND THE AMERICAN PETROLEUM INSTITUTE**

2014 Standards for the Renewable Fuel Standard Program
Docket ID No. EPA-HQ-OAR-2013-0479

Waiver Requests for the 2014 Renewable Fuel Standards
Docket ID No. EPA-HQ-OAR-2013-0747

The American Fuel & Petrochemical Manufacturers (“AFPM”)¹ and the American Petroleum Institute (“API”)² submit these comments in response to the Environmental Protection Agency’s (“EPA” or “Agency”) proposed rule entitled *2014 Standards for the Renewable Fuel Standard Program*.³ As manufacturers of liquid transportation fuels, AFPM and API members are directly regulated by the Proposed Rule.

The *API/AFPM Petition for Partial RFS Mandate Waiver* (“Waiver Petition”)⁴ asks EPA to use its statutory waiver authority to finalize the 2014 volume standards as follows:
Renewable Fuel Volumes for 2014 (billion gallons)

Cellulosic biofuels	0.0 ⁵
Biomass-based diesel	1.28
Advanced biofuel	1.92
Total renewable fuel	14.8

¹ The American Fuel & Petrochemical Manufacturers (“AFPM”) is a national trade association representing virtually all U.S. refiners and petrochemical manufacturers. AFPM’s refinery members operate 122 U.S. refineries comprising approximately 98% of U.S. refining capacity.

² API is the national trade association representing all segments of the U.S. oil and natural gas industry. Its more than 500 members – including large integrated companies, exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms – provide most of the nation’s energy. Since 2000, the industry has invested over \$2 trillion in U.S. capital projects to advance all forms of energy, including alternatives.

³ 78 Fed. Reg. 71732 (November 29, 2013) (the “Proposed Rule” or “NPRM”). In addition, EPA invites comments on petitions for a waiver at 78 Fed. Reg. 71607 (November 29, 2013). EPA indicated that these dockets are linked and that comments submitted in response to one shall be considered to be submitted in response to the other.

⁴ API/AFPM Petition for Partial RFS Mandate Waiver, EPA-HQ-OAR-2013-0747-0002, *attached hereto* as Appendix A.

⁵ We recommend a cellulosic biofuel mandate of less than two million gallons; significantly less than EPA’s proposal of 17 million gallons.

We believe that these volumes fully address the blendwall issues and will avoid significant economic harm as outlined in the Waiver Petition. For biomass-based diesel, the Waiver Petition proposed 1.28 billion gallons, which is consistent with the NPRM. For total renewable fuel and advanced biofuel, the values from our waiver petition are slightly lower than those from the NPRM. This required the use of both the cellulosic waiver and general waiver provisions from EISA to address the blendwall, resulting in a total volume of ethanol in gasoline averaging 9.7 percent. For cellulosic biofuel, we believe that the proposed range of 8 to 30 million gallons with a volume standard of 17 million gallons is overly optimistic.

In summary, the volume standards we proposed in Waiver Petition are the same or very similar to those proposed by EPA for three of the four renewable fuel categories. We have provided significant justification for our analysis in the waiver petition and elsewhere in this comment document. We agree with the EPA's proposal for the biomass-based diesel standard of 1.28 billion gallons. We recommend that EPA finalize the total renewable fuel volume standard at 14.8 billion gallons and the advanced biofuel volume standard at 1.92 billion gallons. If EPA disagrees, we urge EPA to finalize volumes at the lower end of the ranges proposed in the NPRM (15.00-15.52 billion gallons for total renewable fuel and 2.00-2.51 billion gallons for advanced biofuel). EPA should not finalize volumes outside of these proposed ranges. Because of the overly optimistic projections for cellulosic biofuel, we continue to recommend that EPA finalize the cellulosic volume standard as an annualized average based on the most recent 3 months of cellulosic biofuel production.

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I. EPA's Use of RFS Waiver Provisions to Lower the 2014 Advanced and Total Renewable Mandates Is Appropriate and Reasonable.

EPA is proposing to reduce the 2014 statutory volumes of advanced and total renewable fuel using a combination of the Agency's authority under two separate provisions – the cellulosic waiver provision and the general waiver provision.⁶ EPA's exercise of these waiver authorities is consistent with the plain language of the law and is entirely reasonable. API and AFPM generally agree with much of EPA's waiver analysis. For the reasons set forth in the Waiver Petition and in these comments, the reduction of the cellulosic biofuel mandate is compelled under the law due to the dramatic shortfall of cellulosic biofuel production.⁷ Adjustments of the advanced and total renewable mandates are required on the basis of the inability to produce and consume the statutory volumes of renewable fuels in U.S. transportation fuel. In this regard, if the statutory volumes are not waived for 2014, the RFS will result in an inadequate supply of renewable identification numbers ("RINs"), an inadequate supply of gasoline and diesel fuel, and severe economic harm to consumers and the national economy. In contrast, interpreting the RFS waiver provisions too narrowly would be an unreasonable interpretation of the law that would lead to absurd results, undermine the viability of the entire RFS program, and do severe harm to consumers and the entire U.S. economy. In short, although we believe that Congress must ultimately act to repeal the RFS, EPA is correct to use its waiver authority in this rulemaking to avoid severe adverse consequences of the blendwall and the inability to produce or supply renewable fuel.

A. The Cellulosic Waiver Provision

In 2011, 2012 and 2013, EPA used its Clean Air Act ("CAA") cellulosic waiver authority to reduce the statutorily-prescribed volumes of cellulosic biofuel. Indeed, the Agency was required to reduce these volumes based upon EIA estimates that cellulosic biofuel production would fall far short of the statutory goals:

For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume established under paragraph (2)(B), as determined by the Administrator based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator shall reduce the applicable volume of cellulosic biofuel required under paragraph (2)(B) to the projected volume available during that calendar year.⁸

Although EPA is late in proposing this rule and EIA has apparently failed to provide an estimate of cellulosic biofuel production for 2014 (an estimate that was statutorily required by October 31, 2013), it is abundantly clear that cellulosic biofuel production

⁶ See Proposed Rule at 71732, 71754.

⁷ *Id.* at 71607.

⁸ CAA section 211(o)(7)(D)(i).

will be miniscule in comparison to the statutory 2014 target of 1.75 billion ethanol equivalent gallons. EPA estimates that cellulosic biofuel production for 2014 will be 17 million gallons.⁹ This finding alone requires the Agency to exercise its 211(o)(7)(D)(i) waiver authority and substantially reduce the cellulosic volumes set forth in the statute.

As EPA recognizes, the law allows the Administrator to adjust both the advanced biofuel and total renewable fuel volumes to the extent that the Administrator adjusts the cellulosic biofuel volume.¹⁰ That precondition will be met in 2014, and EPA's use of its authority is reasonable. In 2014, nearly all of the 1.75 billion gallon cellulosic biofuel requirement will need to be waived. This volume constitutes nearly 50% of the total volume of required advanced biofuels. In addition, while the cellulosic biofuel requirement constitutes a smaller percentage of the total renewable fuel requirement for 2014, EPA has analyzed production and supply issues attendant to meeting that volume in 2014. Production, supply and use constraints for non-ethanol advanced biofuels prevent such fuels from "filling any gap" caused by the waiver of nearly the entire cellulosic biofuel requirement.¹¹

B. The General Waiver Provision

1. The General Waiver and the Cellulosic Waiver Provisions Are Complementary

EPA correctly recognizes that it must reduce the advanced biofuel and total renewable fuel mandates more than the reduction in cellulosic biofuel to address the blendwall problem. Thus, in addition to the cellulosic waiver, EPA proposes to invoke the law's general waiver provision, which allows EPA to make adjustments to any of the four renewable fuel categories.¹² It is reasonable for EPA to interpret the law such that this general waiver provision and the cellulosic waiver provisions complement each other. There is nothing in either provision that suggests that one limits EPA's authority under the other.¹³ Moreover, reading them together, as EPA does, is consistent with the principle that statutes should be read to give meaning to all provisions.¹⁴

⁹ AFPM and API do not agree with the agency's estimate of cellulosic production for 2014. This issue is addressed in detail in Section IV.B, *infra*.

¹⁰ CAA section (o)(7)(D)(i) provides that "For any calendar year in which the Administrator makes such a reduction, the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume."

¹¹ We would also note that EPA has interpreted its waiver authority to require that both the total renewable fuel and advanced biofuel requirements need to be waived under CAA section 211(o)(7)(D)(i), not one or the other. Proposed Rule at 71755.

¹² CAA section 211(o)(7)(A).

¹³ Note the general waiver provision was included in the original law establishing the RFS program, the Energy Policy Act of 2005 ("EPACT 2005"). The cellulosic waiver provision was added in the Energy and Security Act of 2007 ("EISA"). The only change that Congress made to the general waiver provision in EISA was to expand the parties that could request a waiver. Thus, Congress did not limit the authority contained in CAA section 211(o)(7)(A) by the enactment of additional waiver authority in CAA section 211(o)(7)(D).

¹⁴ See *Duncan v. Walker*, 533 U.S. 167, 174 (2001).

Consistent with these principles, and the plain language of the law, EPA must use its general waiver authority to go beyond the cellulosic waiver provision to further adjust the advanced and general renewable categories.

As EPA explained in the NPRM, the general waiver provision allows EPA to waive any of the four renewable fuel categories in whole, or in part, upon a determination that the mandates would cause severe economic or environmental harm or there is an inadequate domestic supply:

CAA 211(o)(7)(A) provides that EPA, in consultation with the Secretary of Agriculture (USDA) and the Secretary of Energy (DOE), may waive the applicable volume requirements of the Act in whole or in part based on a petition by one or more States, by any person subject to the requirements of the Act, or by the EPA Administrator on her own motion. Such a waiver must be based on a determination by the Administrator, after public notice and opportunity for comment, that:

- Implementation of the requirement would severely harm the economy or the environment of a State, a region, or the United States; or
- There is an inadequate domestic supply.

* * * *

Because this provision provides EPA the discretion to waive the volume requirements of the Act “in whole or in part,” we interpret this section as granting authority to waive any or all of the four applicable volume requirements in appropriate circumstances.¹⁵

2. “Inadequate Domestic Supply” Includes Supply to Consumer

EPA proposes to reduce the advanced and general renewable categories on the basis of “inadequate domestic supply.” EPA explains that that renewable fuel is “best understood in terms of the person or place using the product.”¹⁶ EPA correctly points out that the vast majority of renewable fuel is not consumed as neat fuel, but instead, it is blended downstream of production. Various renewable fuel products exist, but ethanol-blended gasoline and to a far lesser extent, biomass-based diesel blended into conventional diesel, are predominantly used for compliance. Thus, the reference to “inadequate domestic supply” in the general waiver provision must be read with respect to the prime objective of the RFS program: the renewable fuel content of transportation fuel.

Indeed, this intent is manifest in the Congressional directive for EPA to promulgate regulations to implement the program. Under CAA section 211(o)(2)(A)(i), implementing regulations for the RFS program are to ensure that “*transportation fuel . . . on an annual average basis, contains*

¹⁵ Proposed Rule at 71755.

¹⁶ Proposed Rule at 71756.

at least the applicable volume of renewable fuel . . .”¹⁷ This has been true since the EPA first promulgated regulations to implement the RFS program in 2007. The “RFS1” program required that EPA “promulgate regulations to ensure that gasoline sold or introduced into commerce in the United States . . . on an average annual basis, contains the applicable volume of renewable fuel . . .”¹⁸

In this rulemaking, EPA explains that it is reasonable for the Agency to interpret “inadequate domestic supply” as including “the full range of constraints that could result in an inadequate supply of renewable fuel to the ultimate consumers, including fuel infrastructure and other constraints. This would include, for instance, factors affecting the ability to produce or import qualifying renewable fuels as well as factors affecting the ability to distribute, blend, dispense, and consume those renewable fuels.”¹⁹ This is not only a reasonable interpretation, but a required one. As demonstrated by the regulatory mandates of CAA section 211(o)(2)(A)(i), the focus of the RFS program is not the supply of renewable fuels per se, but instead the supply of renewable fuel in gasoline and diesel. The waiver term “inadequate domestic supply” must be read in the context of the RFS mandate it is waiving, *i.e.*, the requirement for finished transportation fuels to contain renewable fuels.

3. EPA Has Previously Interpreted “Supply” to Include “RINs”

The Proposed Rule indicates that EPA has not previously “interpreted or applied the waiver provision in CAA section 211(o)(7)(A)(ii) related to ‘inadequate domestic supply’.”²⁰ This is incorrect. On several occasions within both rulemakings and in response to waiver requests, EPA has clearly interpreted 211(o)(7) to include the supply of fuel and to specifically include the supply of fuel as represented by available RINs. Moreover, in responding to the API/NPRA/WSPA petition for waiver of the 2011 cellulosic biofuel mandate, EPA stated that:

*For most biofuels EPA believes that a demonstration by a petitioner that there were insufficient RINs available from the previous year (subject to the 20% carry-over limitation) and the current year’s production to allow for compliance with the standard could be a basis for finding that there was an ‘inadequate domestic supply.’ The ‘supply’ in question could be fuel, as Petitioners assume.*²¹

More recently, in denying a 2012 petition for an RFS waiver under CAA section 211(o)(7)(A), EPA extensively analyzed the production of renewable fuel and the number of available RINs in 2012, in particular, the amount and existence of “rollover RINs” from 2011 that could be used for compliance with the 2012 RFS. In its discussion of legal authority, the Agency stated that:

¹⁷ CAA section 211(o)(2)(A)(i) (emphasis added).

¹⁸ *Id.*

¹⁹ Proposed Rule at 71755.

²⁰ *Id.*

²¹ Administrator Jackson Letter to Charles Drevna denying petitions for reconsideration of portions of the December 9, 2010 RFS Rule and all requests to waive the 2011 RFS cellulosic biofuel standard, p. 17 (May 22, 2012) (emphasis added).

EPA agrees that implementation of the RFS must necessarily occur within the context of existing market conditions, and that it is necessary and appropriate for EPA to consider the effect of RFS implementation in the context of those existing conditions. That is why for today's determination EPA has modeled the impact of RFS implementation in the current economic environment, including the context of the current drought and its impacts on corn yields and corn prices. Nor does EPA believe that its interpretation renders the provision impossible to meet. In Section V we discuss a number of key parameters and inputs used in our modeled analysis; these, include *availability of rollover RINs, gasoline prices and corn yields, among others*. Changes in one or several of these variables could lead to analytical results that could provide support for a finding that implementation of the RFS is severely harming the economy—but our analysis does not support such a finding for the time period and scenario analyzed here.

While the 2012 waiver denial involved consideration of “severe economic harm” and not direct interpretation of the “inadequate domestic supply” prong of the general waiver provision, clearly EPA has considered the amount of available RINs to be a key factor in its waiver determinations under CAA 211(o)(7)(A). In both waiver determinations cited above, EPA asserted authority to assess market conditions and the ability of obligated parties to comply with RFS mandates when considering CAA section 211(o)(7) waiver petitions. The EPA has never adopted a restrictive interpretation of “supply” that would limit this term to just renewable fuel production divorced from market impacts and the regulatory implementation of the program through the generation and use of RINs.

EPA also has an additional opportunity to explain its interpretation of these provisions in the context of the pending Waiver Petition. In fact, EPA is under a statutory mandate to approve or disapprove this petition by November 13, 2013.²²

4. “Inadequate Domestic Supply” Is a Low Statutory Threshold That Has Been Met

In responding to RFS waiver petitions filed in 2008 and 2012, EPA focused on the extent of harm that could be considered “severe” economic harm. EPA compared “severe” standard contained in the general waiver provision to the CAA section 181 ozone classification system. This system incorporates tiers of ambient air quality in order to classify the extent of an areas nonattainment, labeling areas as being in either extreme, severe, serious, moderate, marginal nonattainment.²³ In its 2008 waiver decision, EPA stated that “‘severe’ should be similarly interpreted for purposes of section 211(o)(7), as indicating a point that is quite far along a

²² See CAA section 211(o)(7)(B).

²³ 73 Fed. Reg. 47168, 47172 (August 13, 2008).

continuum of harm, though short of extreme.”²⁴ In its 2012 waiver decision, EPA stated that it “interprets ‘severely harm’ as specifying a high threshold for the nature and degree of harm.”²⁵

In the current rulemaking, EPA is assessing whether there is “inadequate domestic supply.” Therefore, whatever decision EPA may make with regard to what constitutes “supply,” EPA must employ a much lower hurdle for demonstrating that waiver is necessary based on an “inadequate” supply under CAA section 211(o)(7)(A)(ii) versus a “severe” harm under CAA section 211(o)(7)(A)(i). Clearly, Congress employed different standards of proof as between the two prongs of the general waiver provision.

In this regard, if EPA were to use a similar interpretation to its 2008 waiver decision, EPA could decide that something constitutes an “inadequate domestic supply” where the supply of fuel is “not adequate” or “not sufficient.” Under CAA section 110(a)(2)(D), the provision governing State Implementation Plans to achieve attainment of national ambient air quality standards, EPA is required to decide whether SIPs contain “adequate” provisions to ensure compliance (*i.e.*, that the provisions are not sufficient in EPA’s judgment to provide for attainment of air quality standards). In the context of the current rulemaking, EPA then need only decide that the supply of fuel will not be “adequate” or “sufficient” in order to utilize its waiver authority in CAA section 211(o)(7)(A)(ii).

5. EPA’s Interpretation of the Law Is Reasonable

Even if the RFS did not concentrate on the supply of transportation fuels, for the reasons explained by EPA in the proposal and the additional reasons explained here, interpretation of the general waiver provision to include the fuel supply system is reasonable and wholly consistent with Congressional intent in enacting the RFS.²⁶ Furthermore, excessively narrow interpretations that attempt to limit EPA’s authority to make adjustments to the mandated volumes would lead to unreasonable, harmful, and absurd results.

To fully understand EPA’s interpretation of the general waiver provision, it is necessary to understand the structure of the law and some of its history, since the key operative provisions of the law were set forth in EPACT 2005 and EPA’s RFS1²⁷ regulations, later ratified by Congress in EISA and the ensuing RFS regulations. As explained further below, the RFS does not guarantee the use of any particular amount of renewable fuels. Rather than guarantee the use of any particular volume of renewable fuel,²⁸ the key operative mechanism is that the RFS in fact

²⁴ *Id.*

²⁵ 77 Fed. Reg. 70752, 70756 (November 27, 2012).

²⁶ See Proposed Rule at 71754-71757.

²⁷ RFS1 refers to the program as defined by EPACT 2005. RFS2 is the program as revised by EISA.

²⁸ As EPA has explained, if the amount of gasoline and diesel fuel supplied to the U.S. in a year is less than the volumes that EPA and EISA expect to be demanded when setting the annual standards, the volumes specified in the law are not in fact required. 72 Fed. Reg. 23900 (May 1, 2007) at 23911 (“If actual gasoline consumption were to exceed the EIA projection, the result would be that renewable fuel volumes will exceed the statutory requirements. Conversely, if actual gasoline consumption was less than the EIA projection for a given year, theoretically a renewable fuel shortfall could occur.”).

limits the supply of gasoline and diesel to the United States based on the amount of renewable fuels consumed in U.S. transportation fuels. Obligated parties can only supply as much gasoline and diesel fuel for U.S. consumption as they have RINs to meet the obligation that supplying such fuel incurs. Against this background, it is not surprising that Congress granted EPA authority to waive the renewable fuel volume requirements to avoid the consequences of an inadequate domestic supply of gasoline and diesel fuel. Indeed, it would have been reckless and unreasonable for Congress not to grant EPA such authority.

a. EPACT 2005 and EPA's 2007 Regulations Established the Basic Structure of the RFS Program

To understand the reasonableness of EPA's interpretation, the basic structure of the RFS, which was established in EPACT 2005 and EPA's 2007 regulations implementing this law must be understood.²⁹ Under the basic structure of the RFS as originally implemented,³⁰ volumes of renewable fuels were expressed in billions of gallons on a national basis.³¹ Each year, EPA was required to convert the applicable volumes into percentage standards that apply to individual obligated parties.³² EPACT 2005 specified that the renewable fuel obligation was to "be expressed as a volume percentage of gasoline . . ."³³ Percentage standards were to be based on expected gasoline demand for the upcoming year.³⁴

In terms of compliance with the renewable fuel obligation, each obligated party was required to multiply the percentage standard by the amount of gasoline supplied for use in the United States.³⁵ The RFS did not apply to gasoline exports. Instead, each refiner's or importer's renewable volume obligation (RVO) was based on gasoline sold or introduced into commerce in the United States.³⁶

In order to assist obligated parties in meeting their annual renewable volume obligations, RFS1 regulations established RINs as the currency of the RFS program. RINs were defined to represent volumes of renewable fuels. Under RFS1, since the amount of RINs required for compliance was based on multiplying the applicable percentage (Renewable Fuel Standard) times an obligated party's annual non-renewable gasoline volume,³⁷ RINs were essentially permits to supply gasoline to the United States.

²⁹ The applicable provisions from EPACT 2005 and EISA are attached hereto in Appendix E.

³⁰ See 40 C.F.R. §§ 80.1105, 80.1106, and 80.1107; 72 Fed. Reg. 23993 (May 1, 2007).

³¹ CAA section 211(o)(2)(B). See also CAA section 211(o)(2)(A)(iii)(II) prohibiting restrictions on the geographic areas in which renewable fuels may be used and imposition of per-gallon obligations.

³² CAA section 211(o)(2)(A)(iii).

³³ *Id.*

³⁴ CAA section 211(o)(3)(A).

³⁵ See 40 CFR § 80.1107; 72 Fed. Reg. 23994.

³⁶ CAA section 211(o)(2)(A)(i).

³⁷ *Id.*

Neither the CAA nor EPA's RFS1 regulations imposed any compliance obligations on marketers to offer renewable fuels or consumers to purchase them.³⁸

The above provisions can be expressed in simple mathematical formulas. It is helpful to understand the formulas as they make clear some very basic relationships under the law:

- The applicable renewable fuel volume³⁹ divided by expected gasoline demand equals the RFS percentage standard.
- The RFS percentage standard multiplied by the volume of gasoline actually supplied in the United States by an obligated party equals obligated party's RVO.
- The total of all RVOs nationally equals the number of RINs needed for compliance.

Stated another way, the RFS percentage standards multiplied by the amount of gasoline supplied to the United States equals the number of RINs needed for compliance.

The quantity of RINs available for compliance depends upon the amount of renewable fuel actually consumed – not the production or supply of renewable fuels.

Using the logical tautologies created by the formula to calculate the RVO makes clear that the key operational mechanism of the law and EPA's RFS1 regulations is that the amount of gasoline that can be supplied to the United States is limited by the amount of renewable fuels that can be consumed in gasoline. Or, more simply, if one were to ask the question how much gasoline could be supplied in the U.S., the answer would be the amount of renewable fuel consumed divided by the RFS percentage standard.

b. In 2007, Congress Ratified the Basic Structure of the RFS as Established in EPACT 2005 and the RFS1 Regulations Thereby Limiting the Supply of Gasoline and Diesel Fuel

EISA expanded the categories of renewable fuel from the single category included in EPACT 2005 to four categories – cellulosic, biomass-based diesel, advanced, and general renewable. EISA also greatly increased the volumes of renewable fuels specified in the law from 7.5 billion in EPACT 2005 to 36 billion gallons. And, rather than just including gasoline in the RFS as in EPACT 2005, EISA expanded the law to include diesel fuel as well. But, even with all these

³⁸ Over 94 percent of all retail gasoline stations are independently owned and operated. They are not owned and operated by the RFS obligated parties. [Gilligan, Dan. Statement to U.S. Senate, Energy and Natural Resources Committee, *To explore the effects of ongoing changes in domestic oil production, refining and distribution on U.S. gasoline and fuel prices*, Hearing, July 16, 2013. Found at http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=57e91a3d-9cc4-4872-b1ee-b0c105169177. Accessed January 27, 2014.]

³⁹ Presuming that there are no waivers granted under CAA section 211(o)(7).

changes, the basic operation of the RFS, as it is relevant to the blendwall problem and EPA's interpretation of the waiver provision, are the same now as they were in EPACT 2005.⁴⁰

EISA did not substantially change the key operational provisions of RFS that determine the calculation of the RFS percentage standard, an obligated party's RVO or the number of RINs required for compliance (as outlined above) as established in EPACT 2005. Instead, the main difference between RFS2 as enacted by EISA and RFS1 is the fact that there are now four categories of renewable fuel rather than one and the RFS is applied to both gasoline and diesel fuel. The basic structure of the law established by EPACT 2005 and EPA's RFS1 regulations, as modified and ratified by Congress in EISA, remains the same in all primary respects including the specification of volumes of renewable fuel, the calculation of the RFS percentage standard, the calculation of an obligated party's RVO and the role of RINs in compliance. Therefore, under both RFS1 and RFS2, the RINs needed for compliance (and thus the level of the RFS in any year) depend on fuel (*i.e.*, gasoline and diesel) consumption and not the production or supply of renewable fuels. Thus, if we ask the question "how much gasoline and diesel fuel can be supplied to the U.S.?" the answer remains the same: renewable fuel consumed divided by the RFS percentage standard. The main difference between the law as it is now codified under EISA versus EPACT is that the scope of the RFS is broader in that it limits diesel supplies in addition to gasoline supplies.

Notwithstanding widespread misunderstanding of how the RFS operates, the law enacted by Congress in 2005, implemented by EPA, and then ratified by Congress in 2007 in EISA, does not guarantee any specific volume of renewable fuel will be consumed in any year. Instead, the RFS statutorily "mandated" volumes will only be used if the amount of gasoline and diesel supplied is equal to or greater than the amount expected to be demanded. If the amount supplied is less than the amount expected to be demanded, then the "mandated" volumes will not be consumed.⁴¹ EPA explained this in the original RFS1 rules⁴² and Congress ratified this approach in EISA. Rather than guarantee the use of any particular volume of renewable fuel, the RFS in effect limits the supply of gasoline and diesel fuel by the amount of renewable fuel consumed in U.S. transportation fuels.

⁴⁰ Note that the general waiver provisions were established in EPACT 2005. The only change made in EISA to CAA section 211(o)(7)(A) was to expand the parties that can seek a waiver. The applicable provisions from EPACT 2005 and EISA are attached hereto as Appendix E.

⁴¹ It should be further noted that the use of "equivalence values" based on the energy content of renewable fuels also substantially and directly impacts the specified statutory volumes. Thus, EPA has used its available RFS authority to determine that the statutory volumetric requirements of the RFS do not need to be literally required in terms of physical gallons.

⁴² 72 Fed. Reg. 23900, 23911 (May 1, 2007) ("If actual gasoline consumption were to exceed the EIA projection, the result would be that renewable fuel volumes will exceed the statutory requirements. Conversely, if actual gasoline consumption was less than the EIA projection for a given year, theoretically a renewable fuel shortfall could occur.").

c. The General Provisions of the Law Do Not Take Precedence Over the Specific Provisions

Some stakeholders point to the general language of CAA section 211(o)(2)(A) that directs EPA to promulgate regulations to “ensure” that the volumes of renewable fuels specified in CAA section 211(o)(2)(B) are contained in transportation fuel as providing some form of “guarantee” that specified volumes of renewable fuel will be used. The law does contain such general language; however, that language is modified by the more specific provisions of the Act, which direct EPA to determine applicable percentages, to make certain adjustments⁴³ and that authorize waiver of the statutory volumes under certain circumstances. Thus, the law establishes flexibility rather than an ironclad guarantee of any renewable fuel volume for any year. And, when Congress amended the RFS in 2007, it must be presumed to have understood that the law does not in fact guarantee the use of any particular volumes of renewable fuel.⁴⁴

d. The RFS Does Not Require Marketers to Offer Renewable Fuels or Require Consumers To Purchase Renewable Fuels, Thereby Further Limiting Renewable Fuel Consumption

There is nothing in the law, or the regulations, that requires marketers to offer renewable fuels, or consumers to purchase them. This was the case in the original RFS1 regulations and it remains the case under the RFS2 regulations. EPA discussed this aspect of the program at length in the RFS2 rulemaking, when it discussed the difficulties associated with expansion of E85 availability.⁴⁵ Nevertheless, some stakeholders argue that obligated parties are somehow obligated to invest in retail infrastructure to offer additional renewable fuels.⁴⁶ Such assertions have no basis in the law or current EPA’s regulations. Obligated parties have the legal responsibility to comply with the RVO. But the RFS imposes no obligation on any party to invest in retail infrastructure to offer additional renewable fuels. Indeed, it would be unreasonable for Congress to have expected that obligated parties would do so given that over 94 percent of all retail gasoline stations are independently owned and operated – *i.e.*, not owned by obligated parties.⁴⁷

As explained in more detail in the 2014 Waiver Petition, and as EPA recognizes in this proposal, it is simply infeasible to consume the volumes of renewable fuel specified in the law in 2014.⁴⁸

⁴³ See CAA section 211(o)(3)(C).

⁴⁴ Among other factors, EPA regulations establishing equivalence values for renewable fuel were incorporated in 40 C.F.R. Part 80, Subpart K prior to the enactment of EISA.

⁴⁵ 75 Fed. Reg. 14670, 14759 (Mar. 26, 2010).

⁴⁶ See Letter from Bob Dinneen to Administrator McCarthy, EPA-HQ-OAR-2013-0747-0011 (August 28, 2013).

⁴⁷ See Gilligan, Dan. Statement to U.S. Senate, Energy and Natural Resources Committee, *To explore the effects of ongoing changes in domestic oil production, refining and distribution on U.S. gasoline and fuel prices*, Hearing, July 16, 2013. Found at

http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=57e91a3d-9cc4-4872-b1ee-b0c105169177. Accessed January 27, 2014

⁴⁸ Proposed Rule at 71754.

Due to infrastructure and vehicle incompatibility issues, and limited feed stock availability for biomass-based diesel fuels, in 2014 E15, E85, and biomass-based diesel will not be consumed in sufficient volumes to enable the continued unfettered supply of gasoline and diesel fuel for U.S. consumption. These are factors that EPA can clearly take into consideration when waiving RFS applicable volumes since they affect the supply of fuel to consumers.

e. It is Entirely Reasonable for Congress to Grant EPA Authority To Make Adjustments to Avoid the Potentially Severe Adverse Consequences of a Legal Structure that Limits Supplies of Gasoline and Diesel Fuel to the United States

It is entirely reasonable for Congress to provide EPA authority to make adjustments to the RFS program that does not guarantee the use of any specific volume of renewable fuel and that limits the supply of gasoline and diesel fuel in the United States. Indeed, as discussed in the Waiver Petition, EPA could have been much more direct and concluded that there will be an inadequate domestic supply of RINs and that will result in an inadequate domestic supply of gasoline and diesel for U.S. consumption as the basis for the waiver. Furthermore, given the potential implications of limiting the supply of gasoline and diesel fuel to the United States on consumers and the economy as explained in the NERA Study⁴⁹ and the Waiver Petition, EPA would also be justified in issuing a waiver to avoid severe economic harm to consumers and the entire U.S. economy.⁵⁰

In contrast, adopting a limited interpretation of the law as if the phrase “inadequate domestic supply” were limited to the ability to produce or import renewable fuels would be unreasonable. As explained above, the key operative provisions of the RFS have very little to do with production of renewable fuels.⁵¹ Rather, the operative provisions depend on consumption of renewable fuels. Congress provided EPA with waiver authorities to make adjustments to avoid the potential negative consequences of implementing a statutory volume mandate over a 15-year period and, in this regard, it is significant that both the general waiver authority and the cellulosic biofuel waiver authority are essentially unlimited. They allow the Administrator to reduce applicable volumes in each year that an applicable standard applies, allow for repeated and renewed waivers and do not limit the “size” of the necessary waiver and the number of waivers

⁴⁹ NERA Economic Consulting, “*Economic Impacts Resulting from Implementation of RFS2 Program*”, October, 2012 (hereinafter “NERA Study”). See Appendix A.

⁵⁰ In contrast to earlier requests for waivers, where the issuance of a waiver would have had limited market impacts because the blendwall had not yet been reached, the issuance of a waiver here would have immediate real world impacts by removing the limitations on supply of gasoline and diesel that would otherwise exist due to the inability to consume the volumes of renewable fuels specified in EISA. See *e.g.*, 77 Fed. Reg. 70752, 70760 (November 27, 2012) (“Certain empirical data also support the projection that the RFS is unlikely to be binding in the 2012/2013 timeframe.”).

⁵¹ Indeed, currently, the amount of renewable fuel produced in the U.S. far outpaces the amount that can be consumed and significant volumes of renewable fuel are currently being exported. See *U.S. Energy Information Administration*, “Developments in U.S. Ethanol Exports,” *This Week In Petroleum* (July 18, 2012),

<http://www.eia.gov/oog/info/twip/twiparch/120718/twipprint.html>

that can be granted. This contrasts with the separate waiver for biomass-based diesel in CAA section 211(o)(7)(E). This waiver authority is limited to 60 days, cannot exceed 15 percent of the applicable volume for biomass-based diesel and may be constrained by the statutory floor contained in CAA 211(o)(2)(v).⁵²

Thus, the waiver authority at issue in this rulemaking is designed to allow EPA to effectively address a number of different situations that could create negative effects as well as severely undermine public support for renewable fuels. Granting EPA authority to issue waivers only where there is an inability to produce or import renewable fuels would run directly counter to the structure of the law, which primarily hinges on the consumption of transportation fuel. Indeed, it would have been absurd for Congress to have established a 15 year program such as the RFS without providing EPA the authority to address implementation issues. Congress cannot be presumed to act so irrationally.

II. Congress Authorized EPA to Waive the RFS Based on a Finding of Severe Economic Harm, and the NERA Study Supports Such a Finding

In the current rulemaking, EPA has proposed to adjust the RFS volumes based on “inadequate domestic supply.” However, EPA could also waive the RFS volumes based on a finding of “severe economic harm.” Congress explicitly authorized EPA to waive the RFS mandates, under Section 211(o)(7) of the Clean Air Act, in whole or in part, where there would be *either*: (1) an inadequate domestic supply of fuel; *or* (2) severe adverse consequences to the economy of a state, a region or the United States. As the Waiver Petition demonstrates, the inadequate supply and severe economic consequences projected to occur in 2014 independently establish *both* grounds for a waiver. In 2014, there will be an inadequate supply of RINs—as already definitively recognized by EPA—to satisfy the various mandates of the RFS, forcing the overall reduction of supplies of gasoline and diesel for US consumption. This will result in an inadequate domestic supply of gasoline and diesel fuel. The impact of this fuel shortage will create severe harm across the economy, establishing the second ground for granting a waiver.⁵³

The Waiver Petition demonstrates that the RFS will result in inadequate domestic supplies and severe economic harm. RINs effectively function as a permit to supply gasoline and diesel in the United States. If a refiner cannot secure enough RINs to meet its RVOs, then the refiner is limited in the amount of gasoline and diesel it may supply for U.S. consumption. Consequently, the inadequate supply of RINs leads to an inadequate domestic supply of gasoline and diesel fuel for U.S. consumption and presages severe economic consequences stemming from the RFS. Unless waived, the RFS will cause severe economic harm.

⁵² The biomass-based diesel waiver may be renewed for an additional 60-day period and affect an additional 15 percent of the applicable annual requirement for biomass-based diesel.

⁵³ NERA Study at 38-40

A. The Blendwall Will Force Obligated Parties To Supply Less Fuel for U.S. Consumption, Setting Off a Chain of Events That Causes a Massive Decline in GDP

The fuels market already is experiencing the economic effects of the impending blendwall. Starting early last year, prices for ethanol D6 RINs skyrocketed, rising from an average of below 4 cents per RIN in years prior to 2013 to over a \$1.40 per RIN in July 2013.⁵⁴ A significant price spike occurred in conjunction with EPA's announcement of the proposed renewable fuel volumes for 2013.⁵⁵ The January 2014 average ethanol RIN price is now many multiples of the average ethanol RIN price experienced in the five years since the volume requirements for renewable fuels contained in section 211(o)(2)(B) were increased to their current level.⁵⁶

While the near term economic effects of higher RIN prices are troublesome enough, the arrival of the blendwall in 2013 and depletion of banked RINs in 2014 likely will force obligated parties to take drastic measures to comply with the law. NERA Economic Consulting has projected the economic impacts that the blendwall will impose on consumers and the U.S. economy through 2015.⁵⁷ NERA's model projects a \$1,300 decline in average household consumption and an aggregate GDP loss of \$270 billion in 2014.⁵⁸ If these effects are not somehow avoided by changes to the current implementation of the RFS, NERA concluded that the aggregate economic impacts by 2015 will be a loss of a staggering \$770 billion in GDP.⁵⁹

The decrease in GDP, projected by NERA, results from a combination of (1) structural problems within the RFS itself and (2) technical constraints that prevent the development and deployment of higher ethanol blends that could forestall the blendwall.⁶⁰ With regard to the structural problems, the RFS requires each obligated party to meet an annual RVO, which is calculated as a percent of their total annual volume of gasoline and diesel produced or imported for sale in the United States by that obligated party during the year.⁶¹ Thus, the final RVO in a given year for an obligated party will fluctuate based on its own fuel production and imports. As the RFS-mandated volumes increase in the face of declining gasoline demand and infrastructure and vehicle incompatibility constraints—and the blendwall is hit—obligated parties will need more RINs than they can get from E10. That is to say, the volumes of RINs associated with corn-based and sugarcane-based ethanol that the obligated parties need to comply with the RFS will exceed RINs they purchase from downstream entities that blend 10-percent ethanol in gasoline. Thus, obligated parties will need to draw down previously banked RINs; there will be no “excess” RINs generated for compliance. Existing and available RINs now are likely being held

⁵⁴ Oil Price Information Service, OPIS Daily RIN Prices.

⁵⁵ Parker, Mario. *Ethanol RINs Plunge on Speculation EPA to Announce Final Rules*. Bloomberg News August 6, 2013.

⁵⁶ Oil Price Information Service, OPIS Daily RIN Prices.

⁵⁷ *Id.* at 38-39.

⁵⁸ *Id.* at 38-39 and Table 14.

⁵⁹ *Id.* at 8, 38-39.

⁶⁰ *Id.* at 4.

⁶¹ 40 C.F.R. § 80.1407.

or used for compliance, rather than being sold in the marketplace, and obligated parties needing to buy RINs to comply in 2014 will face a lack of feasible options to sustain their level of gasoline or diesel production and imports.⁶² Because RINs effectively operate as a permit to sell specific quantities of gasoline and diesel, when obligated parties cannot acquire RINs, they must reduce the amount of gasoline and/or diesel they sell in the United States to remain in compliance with RFS.⁶³

With regard to the technical constraints, the U.S. fuel market lacks the physical infrastructure, compatible vehicles, and consumer demand to support enough sales volumes of ethanol-blended fuels other than E10 to meet the growing mandate. While it is legally permissible to blend ethanol in gasoline to produce E85 or E15 blends, simply because EPA has removed one legal impediment to the production of these blends does not mean that local regulations allow the use of these fuels, or that the market and consumers can or will accommodate their use.

Each obligated party will choose its optimal compliance path based upon the cost of RINs, the market response to changes in fuel cost, technology limitations on blending biofuels with petroleum, and infrastructure and consumer acceptance issues surrounding increasing E85 sales.⁶⁴ Without an adequate supply of RINs, obligated parties will turn to the other compliance options available to them: (1) a decrease in fuel production; (2) a decrease in transportation fuel imports; and/or (3) an increase in gasoline/diesel exports.⁶⁵ These alternatives reduce the number of RINs an obligated party needs to demonstrate compliance with the RFS. A decrease in transportation fuel supplied to the domestic economy over and above the current and projected decrease in demand for transportation fuels will likely result in higher fuel costs and will have effects throughout the U.S. economy as manufacturers, distributors, and suppliers adjust to higher fuel costs.⁶⁶ The market's response to obligated parties' attempt to meet their RVOs and comply with the RFS ultimately will force individual households to decrease consumption at the pump and elsewhere.⁶⁷

As detailed in the NERA Study, the overall effect of hitting the blendwall without viable compliance alternatives beyond reducing supply will be a contraction of multiple sectors of the U.S. economy that will ultimately result in a massive decrease in GDP, totaling \$770 billion in 2015. This severe adverse economic impact would be extraordinarily harmful to tens of millions of Americans and far exceeds any level necessary to constitute "severe economic harm" under CAA section 211(o)(7).

Importantly, in the context of considering the harms that will result in 2014 and 2015, nothing in the Clean Air Act requires that the severe economic harm occur in the same year that EPA issues the waiver.⁶⁸ EPA itself recognized that it has discretion when determining what time period to

⁶² NERA Study at 30.

⁶³ *Id.* at 27 (footnote 26) and 37

⁶⁴ *Id.* at 27.

⁶⁵ *Id.* at 27.

⁶⁶ *Id.* at 7.

⁶⁷ *Id.*

⁶⁸ *See* CAA section 211(o)(7)(A).

examine with respect to a severe economic harm analysis in its denial of North Carolina's and Arkansas's waiver petitions.⁶⁹ While EPA previously declined to examine impacts beyond the current calendar year due to an inability to properly assess the relevant variables, such a limitation is data-driven, not a function of the requirements of section 211(o)(7).⁷⁰

The NERA Study fully accounts for fluctuations in fuel prices and availability, and it provides sufficient certainty to conclude severe economic harm will result from reaching the blendwall in the years following 2013.⁷¹ Existing infrastructure cannot support the higher-ethanol blend fuels required to avoid the blendwall. Thus, the NERA Study forms a more than sufficient basis for EPA to waive the requirements of section 211(o)(2) in 2014 and subsequent years.

B. The Harms Detailed in the NERA Study Are Unprecedented

The E10 blendwall has arrived, making 2014 unlike any other year that EPA previously examined. As explained in the NERA Study, infrastructure, technological, and market limitations will restrict the ability of obligated parties to market ethanol blends higher than E10 for use in conventional vehicles.⁷² As a result, the only practical compliance strategy for obligated parties will be to reduce the amount of fuel produced for the U.S. market, causing sharp declines in fuel availability and associated increases in fuel prices.⁷³ In 2014, the ultimate result will be a decrease in average household consumption of \$1,300 and a net GDP loss of \$270 billion. The severe economic harm becomes worse in 2015 with a decrease in average household consumption of \$2,700 and a net GDP loss of \$770 billion.⁷⁴ EPA's issuance of a waiver here will help ameliorate these effects of the blendwall because it would remove the existing, rather than theoretical, limitation of the supply of gasoline and diesel—thus, this situation differs from earlier waiver situations, where the waiver's impact was not as clear.

The harms calculated in the NERA Study as the result of the blendwall are immediate and unprecedented. In denying the RFS waiver request of several States and other parties in 2012, EPA relied upon Iowa State University's model to evaluate the impact of a potential waiver on corn prices, food prices, feed prices, and fuel prices.⁷⁵ EPA's denial of the 2012 waiver request

⁶⁹ See 77 Fed. Reg. 70752, 70757 (Nov. 27, 2012).

⁷⁰ *Id.*

⁷¹ See *Id.* at 70758 (noting that a waiver petition based on the blendwall itself could provide a proper analysis of all the relevant factors required to grant a petition based on severe economic harm occurring in a year different than the year of the petition's filing).

⁷² The issues associated with E85 and E15 compliance options are discussed in detail in Sections IV.A.2 and IV.A.3, *infra*.

⁷³ NERA Study at 2.

⁷⁴ *Id.* at 8 Table 3.

⁷⁵ 77 Fed. Reg. at 70761. Petitioners do not suggest that the projected levels of harm in the 2008 and 2012 waiver requests, in addition to other information submitted for EPA's consideration, were insufficient to justify the Administrator's exertion of RFS waiver authority, only that the economic harms detailed in the NERA Study present adverse economic impacts of another magnitude altogether than the effects EPA projected in the 2008 and 2012 waiver decisions.

expressed the result of the Iowa State model in terms of avoided costs and concluded that the waiver would have decreased annual household expenditures on fuel just \$1.98-\$17.40.⁷⁶ In EPA's denial of Texas's 2008 waiver petition, EPA relied on the same Iowa State model and concluded implementation of the RFS would increase annual household expenditures only \$3.43-\$34.29.⁷⁷ Unlike those years, the country has run out of practical options because vehicle and refueling infrastructure compatibility is at the blendwall. In contrast to these rather small, previously projected effects, the NERA Study finds that the blendwall will significantly increase costs for both fuel and finished goods in 2014.⁷⁸

In stark contrast with prior waiver petitions to the EPA, the economic harms that will occur here (absent waiver) not only are "certainly impending," they are immediate, unprecedented, widespread, and severe. Indeed, as detailed by NERA, the adverse economic impacts will be felt by virtually every American household and by most of the U.S. economy. Petitioners respectfully submit that the ultimate cost—a massive decrease in GDP totaling \$770 billion in 2015—far exceeds any level necessary to constitute "severe economic harm" under CAA 211(o)(7).

III. Trade Associations Have Standing to File Waiver Petitions on Behalf of Their Members

Certain commenters have suggested that trade associations such as API and AFPM are not permitted to petition for a waiver of the RFS.⁷⁹ These commenters are incorrect.

CAA § 211(o)(7)(A) provides that the EPA Administrator "in consultation with the Secretary of Agriculture and the Secretary of Energy, may waive the requirements of paragraph (2) in whole or in part *on petition* by one or more States, *by any person subject to the requirements of this subsection, or by the Administrator on his own motion.*"⁸⁰

As explained in 2014 Waiver Petition, API and AFPM meet the requirements of § 211(o)(7)(A). Both API and AFPM are trade associations that represent numerous refiners and importers of transportation fuel. These refiners and importers undoubtedly are "person[s] subject to the requirements" of Section 211(o)(2) for purposes of filing a waiver petition.⁸¹ The Supreme Court has recognized that the rights of an association "'and its members are in every practical sense identical.'" *United Food & Commer. Workers Union Local 751 v. Brown Group*, 517 U.S. 544, 552 (1996) (quoting *NAACP v. Alabama ex rel. Patterson*, 357 U.S. 449, 459 (1958)). API and AFPM meet the requirements for "associational standing": (1) their members "would otherwise have standing to sue in their own right" as they are indisputably "person[s] subject to

⁷⁶ *Id.* at 70765.

⁷⁷ 73 Fed. Reg. 47168, 47179 (Aug. 13, 2008).

⁷⁸ NERA Study, *supra* note 4, at 8.

⁷⁹ See Renewable Fuel Association ("RFA"), Request Dismissal of API/AFPM Renewable Fuel Standard (RFS) Waiver Petition, EPA-HQ-OAR-2013-0747-0011 (August 28, 2013).

⁸⁰ CAA Section 211(o)(7)(A).

⁸¹ *Id.*

the” RFS program; (2) the interests they “seek[] to protect are germane to” their purpose; and (3) “neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Hunt v. Washington State Apple Adver. Comm’n*, 432 U.S. 333, 343 (1977); *see also Chamber of Commerce of the United States v. EPA*, 642 F.3d 192, 199 (D.C. Cir. 2011).

Contrary to RFA’s assertion, CAA § 211(o)(7)(A) evidences no intention to displace the normal standards for associational standing. The Supreme Court has explained that litigants seeking to disrupt “settled principles of associational standing” have a “heavy burden.” *Int’l Union v. Brock*, 477 U.S. 274, 290 (1986). RFA’s assertion that API and AFPM cannot represent their members in waiver petitions falls well short of carrying this “heavy burden.” Congress is “presumed to have legislated against the background of our traditional legal concepts.” *United States v. United States Gypsum Co.*, 438 U.S. 422 (U.S. 1978); *see also United States v. Monzel*, 641 F.3d 528, 536 (D.C. Cir. 2011). Congress must therefore speak clearly if it wishes to abrogate “settled principles of associational standing,” *Int’l Union*, 477 U.S. at 290. It did nothing of the sort in CAA § 211(o)(7)(A).

Moreover, even if RFA were correct that API and AFPM could not petition on behalf of their members, several API and AFPM members filed waiver petitions that incorporate the Waiver Petition by reference.⁸² RFA does not (and cannot) contend that these individual obligated parties lack the capacity to file waiver petitions.

Finally, the NPRM makes clear that the waivers it proposes from the statutory volumes of renewable fuel are based on the Administrator’s authority to act *sua sponte* pursuant to CAA section 211 (o)(7)(A).

In today’s NPRM, we are proposing to use the general waiver authority [under CAA § 211(o)(7)(A)] to waive the applicable volume requirements *based on the statute’s authorization for the Administrator to act on her own motion.*⁸³

Thus, EPA’s proposed waivers do not rest exclusively on API and AFPM’s waiver petition or the petition of any individual obligated party, and RFA cannot defeat the proposed waivers by challenging the authority of API and AFPM to file their waiver petition.

⁸² *See, e.g.*, Delek Refining, EPA-HQ-OAR-2013-0747-0003 (September 17, 2013); ExxonMobil, EPA-HQ-OAR-2013-0747-0004 (September 26, 2013); HollyFrontier Refining & Marketing, EPA-HQ-OAR-2013-0747-0005 (September 19, 2013); Lion Oil, EPA-HQ-OAR-2013-0747-0006 (September 17, 2013); Marathon Petroleum Company, EPA-HQ-OAR-2013-0747-0007 (September 9, 2013); National Cooperative Refinery Association, EPA-HQ-OAR-2013-0747-0008 (September 19, 2013); PBF Holding Company, EPA-HQ-OAR-2013-0747-0009 (October 30, 2013); Phillips 66, EPA-HQ-OAR-2013-0747-0010 (September 13, 2013); and Tesoro, EPA-HQ-OAR-2013-0747-0012 (September 13, 2013).

⁸³ Proposed Rule at 71755 (emphasis added).

IV. Volumes of Renewable Fuel in 2014

A. Ethanol

While acknowledging the dilemma of setting a fixed mandate in an uncertain future, EPA noted the dearth of historical data needed to establish baselines for making projections. In particular, EPA discusses uncertainty surrounding the volumes of E0 and E85 in the market today, and how the volumes of these fuels might change in the future. EPA singles out these two fuels since consumption of E0 and E85 affect the ability of the market to use more than 10% ethanol.

As the analyses that follow show, the Proposed Rule contains many projections associated with E85 and cellulosic biofuels that are driven by assumptions without supporting evidence, despite using approaches with varying levels of sophistication. Improved data collection for fuels such as E0 and E85 should enhance EPA's ability to project short-term use of these fuels.

1. E0 is Required in the Marketplace

EPA requested "information and data that would permit us [EPA] to determine the volume of E0 used in the gasoline pool and the appropriateness of incorporating some estimate of E0 into the final standards."⁸⁴ In section IV.B.1.d of the NPRM, EPA's estimate of the total volume of ethanol that could reasonably be consumed in 2014 assumes E0 volumes were essentially zero. This assumption ignores the fact that E0 continues to be supplied to the market today because a segment of the population demands it.

EIA collects and publishes adequate data in their petroleum supply surveys to estimate E0 use. As the analysis below shows, the E0 volume is a significant portion of the gasoline pool and should be included in the calculation of how much ethanol can be consumed in 2014.

The volume of E0 supplied to the market can be determined by using the following equation:

$$Product\ Supplied = Domestic\ production + imports - exports - change\ in\ inventory$$

EIA collects and publishes data for production, imports, and inventory of finished E0. EIA does not collect export data, but publishes data collected by the Census Bureau. Exports of "finished gasoline" are likely all E0 due to the wide range of allowed ethanol content in the world and difficulty of transporting ethanol-blended gasoline. Table 1 demonstrates the calculation of E0 (including links to the required data from EIA) for 2012. Over 4.5 billion gallons of E0 were used in 2012, representing 3.4% of total gasoline product supplied in the U.S.

⁸⁴ Proposed Rule at 71759.

Table 1. Estimation of E0** Using 2012 EIA data

		Thousand barrels per/day (KB/D)	Billion Gallons per year
Production of E0 from Refinery & blender net production--Other category http://www.eia.gov/dnav/pet/pet_pnp_refp_dc_nus_mbbldpd_a.htm	+	646.0	9.93
Imports of E0 http://www.eia.gov/dnav/pet/pet_move_imp_dc_NUS-Z00_mbbldpd_a.htm	+	44.0	0.68
Exports of E0 (assumes that all exports of finished gasoline are E0) http://www.eia.gov/dnav/pet/pet_move_exp_dc_NUS-Z00_mbbldpd_a.htm	-	409.0	6.29
Change in E0 inventory*	-	14.5	0.22
E0 Product Supplied (Production + Imports – Exports – Change in Inventory)	=	295.5	4.54
E0 Percent of Total Gasoline Product Supplied (Consumption) of 8,682 KB/D http://www.eia.gov/dnav/pet/pet_cons_psup_dc_nus_mbbldpd_a.htm		3.4%	

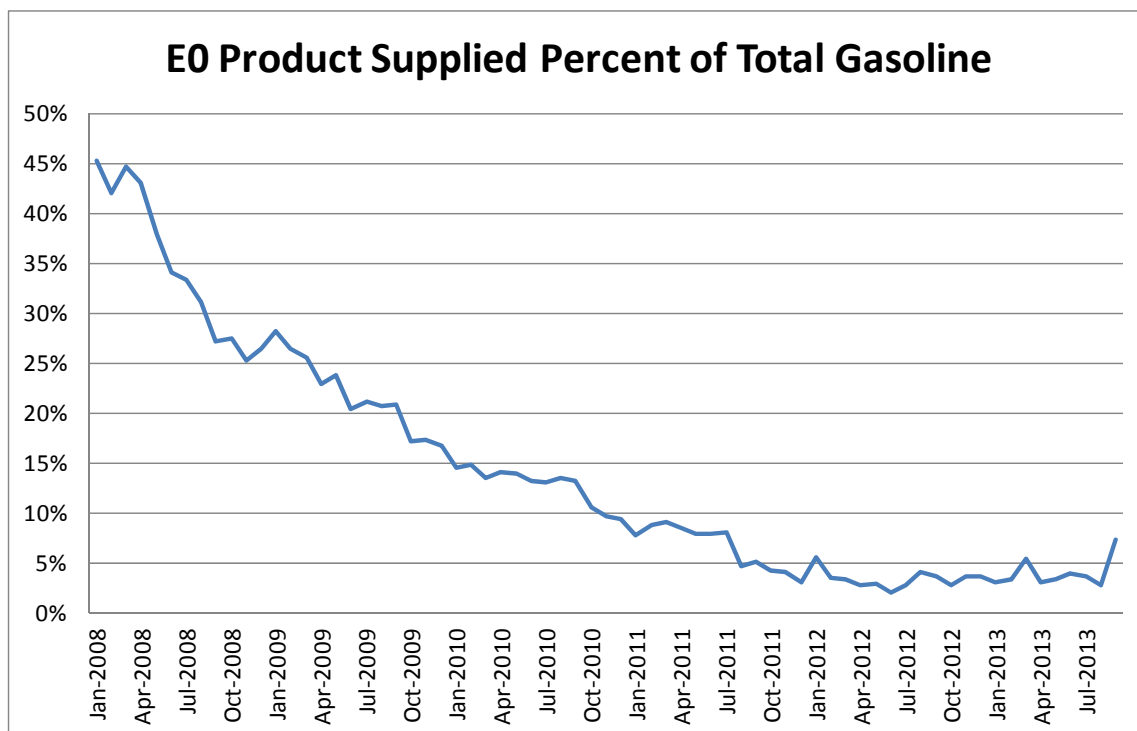
*Calculation of change in E0 inventory over the year http://www.eia.gov/dnav/pet/pet_stoc_wstk_dcu_nus_a.htm			
	2011 Ending Stock (KB)		60,121
	2012 Ending Stock (KB)		54,811
	Change in inventory (KB)		5,310
	Change in inventory (KB/D)		14.5

**Note: Conventional gasoline (vs reformulated) is where E0 is produced and used. EIA data separates finished gasoline into that “blended with fuel ethanol” and “other”. The “other” is the E0 gasoline.

Source: EIA petroleum supply data as referenced with URLs

Applying this methodology to years 2008-2013, we generated Figure 1, which shows that E0 consumption has declined from 2008 through end of 2011 and reached a plateau of about 3.5% of total gasoline consumed thereafter.

Figure 1.



Recommendation: In our Waiver Petition, API/AFPM recommended that EPA establish a total ethanol requirement at 9.7% of the projected gasoline demand (or 12.9 billion gallons) to provide for E0 needs, including compliance with State laws that have been enacted requiring the industry to provide E0 to marketers who then can determine if they wish to add ethanol or not. The E0 volumetric demand of approximately 3.5% of the U.S. gasoline pool supports the API/AFPM waiver request.

2. E85 Data and Projection Analyses

Projections of U.S. E85 consumption are difficult to make due to the limited historical data and complexity in forecasting future demand. First consider E85 data collection. EIA is the only public source of historical monthly data for total U.S. E85 production, which should be close to E85 consumption. As EPA points out, EIA publishes net production of E85 from refiners and blenders. But EPA does not mention that EIA also shows net production of “finished gasoline” from ethanol producers. Ethanol producers reported about 307 thousand barrels of net finished gasoline⁸⁵ or 13 million gallons in 2012. The ethanol-producer data are not broken out by type of gasoline.

⁸⁵ See the renewable and oxygenate producer column volumes in the finished gasoline row of the following EIA table: http://www.eia.gov/dnav/pet/pet_sum_snd_d_nus_mbbbl_a_cur.htm

EPA also looked at their RIN data for insights into E85 consumption. The Agency implicitly assumed that all RINs separated by ethanol producers represent ethanol blended as E85.⁸⁶ There is no clear justification for this assumption. For instance, an ethanol producer that is also an obligated party (or a gasoline blender) would have the ability to separate RINs without producing any E85. This volume should be excluded from the E85 volume projections, unless it can be unequivocally established that these RINs correspond to E85 production.

Recommendation: EPA needs to make full use of data sources within the government, such as EIA and the Internal Revenue Service, to determine E85 sales volumes. Absent any data indicating long-term growth trends, the EPA should apply the status quo when projecting volumes out a single year to be used in setting mandates.

EPA has taken an optimistic view of potential E85 consumption in 2014. The Agency refers to growth trends of both EPA and EIA data, and then indicates the U.S. might see 100 million gallons of E85 in 2013 that could grow to 240 million gallons in 2014 (140% growth in one year). Looking at EIA data in Table 2, a different picture emerges. Between 2011 and 2013 E85 volumes increased modestly from 37.5 to 49.4 million gallons, including all ethanol producer finished gasoline volumes.

Table 2. EIA E85 Volume Information

Data for January through September	Refiner & Blender "E85" Production (Thousand Barrels)	Ethanol Producer Finished Gasoline Production (Thousand Barrels)	Total Possible E85 Production (Thousand Barrels not adjusted to estimate gross E85 production)	Total Possible E85 Production (Million Gallons)
2011	708	185	893	37.5
2012	705	262	967	40.6
2013	785	390	1175	49.4

While Table 2 displayed year-to-date data through September for all years in order to compare information through the most recent 2013 data, EIA's 2012 data show 50 million gallons of E85 produced for the entire year by both blenders and ethanol producers, assuming that all finished gasoline production from ethanol producers was E85. If we apply Table 2's implied growth of 22% from 2012 to 2013 to EIA's 2012 annual data, we would expect 61 million gallons of E85 production in 2013. Even if we use EPA's number in the NPRM of 70 million gallons of E85 supplied in 2012 as the base, 22% growth only results in 85 million gallons in 2013, and just over 100 million gallons in 2014 – a far cry from 240 million gallons.⁸⁷

The EPA methodology used to estimate E85 consumption in 2014 is fundamentally flawed: it uses short term information (January -June 2013) and inappropriately extrapolates the data to

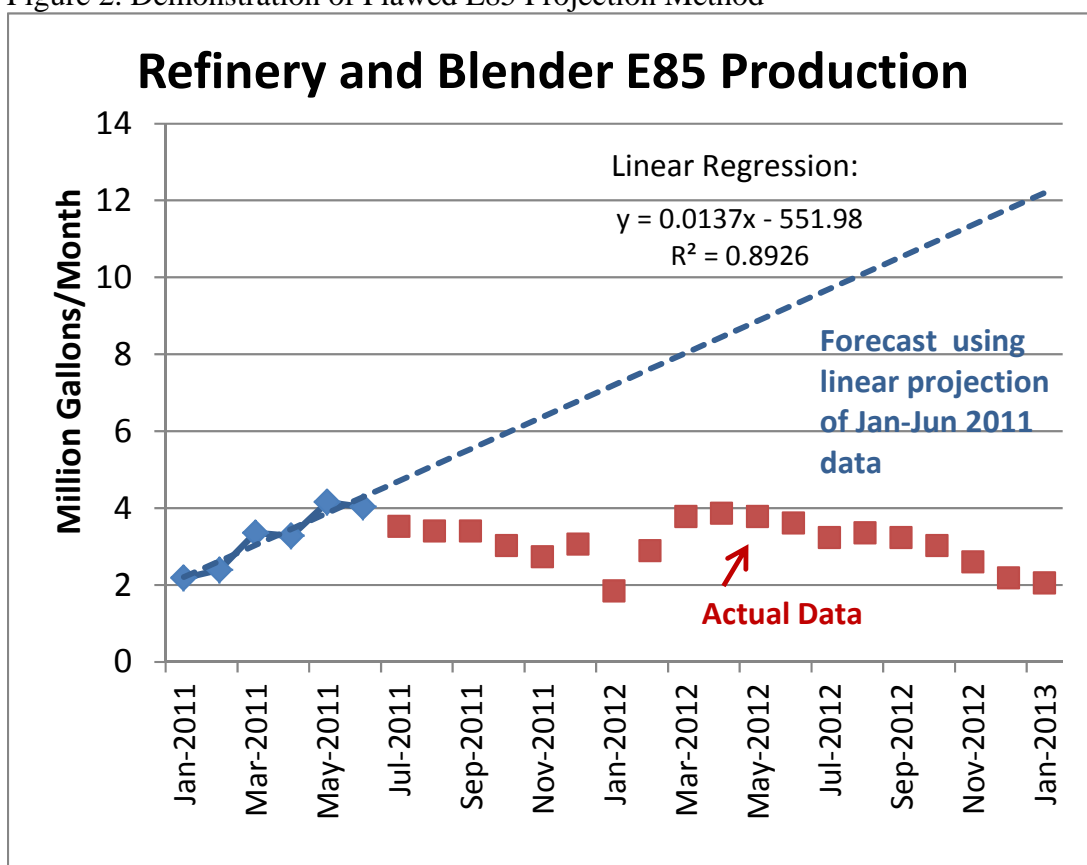
⁸⁶ Proposed Rule at 71759.

⁸⁷ EPA projected that E85 production in 2014 would reach 240 million gallons; see Proposed Rule at 71759.

predict E85 consumption in 2014.⁸⁸ The error is easily demonstrated by applying the EPA methodology to EIA’s January through June 2011 refinery and blender E85 production data⁸⁹ to predict 2012 volumes.

Per Figure 2 below, such extrapolation would have predicted 7 million gallons per month of E85 production in January 2012 and up to 12 million gallons per month of E85 by January 2013, when actual volumes were 1.85 and 2.06 million gallons, respectively. According to EIA, for January-December 2012, actual volumes of E85 production varied between 1.85-3.86 million gallons per month.

Figure 2. Demonstration of Flawed E85 Projection Method



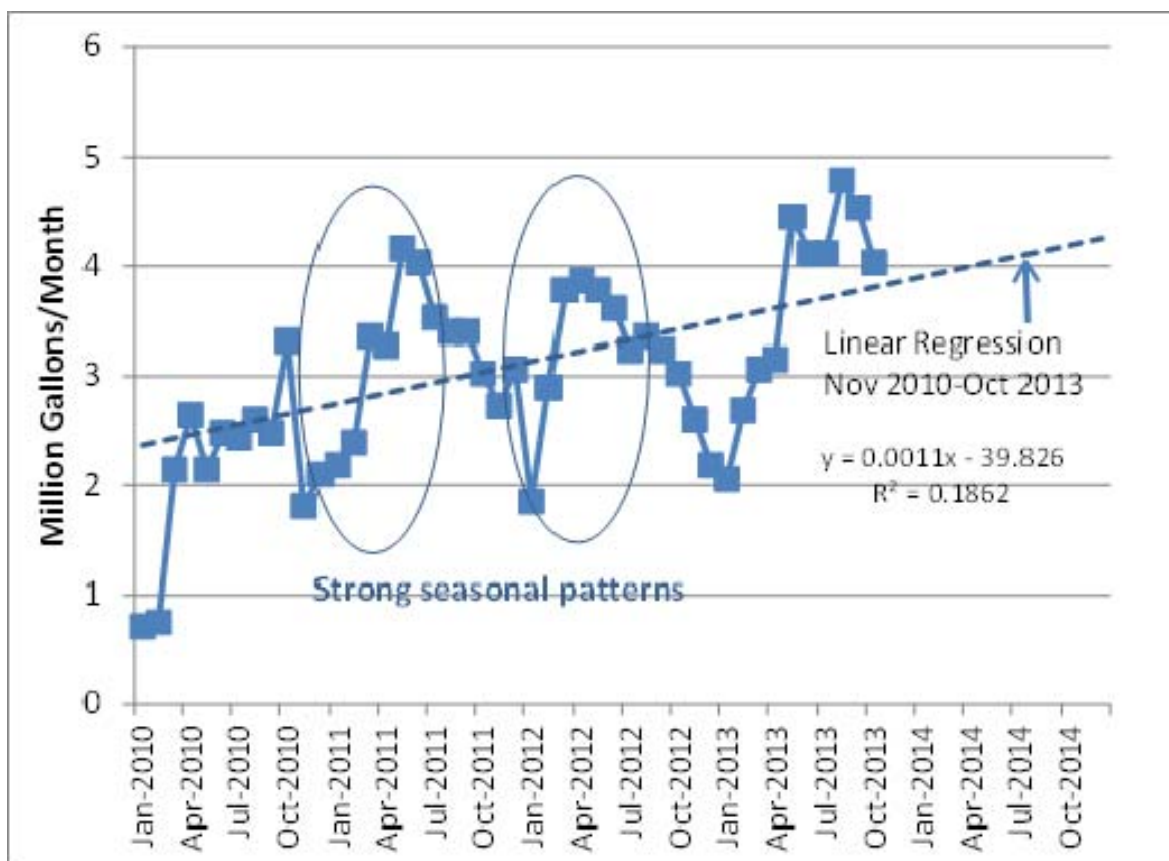
Source: EIA production of finished gasoline with ethanol content greater than 55%. This data is E85, which is allowed to have variable ethanol content to meet driveability and emission requirements.
http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=M_EPM0CAG55_YPR_NUS_MBBL&f=M

⁸⁸ *Id.*

⁸⁹ The EIA data is the finished gasoline production from refiners and blenders greater than 55%, which is E85.

Actual EIA consumption data for E85 suggests seasonality, and short-term data are not reasonable indicators of long-term trends. Even assuming a weak correlation and using all available data, the projected production of E85 implies an average of about 4 million gallons per month in 2014 (Figure 3). Also it is worth noting that the January-June 2013 profile is very similar to the 2011 and 2012 profiles, which refutes EPA’s suggestion that the 2013 trend was related to RIN prices.

Figure 3. E85 Trend Illustration Using EIA Data



Source: EIA petroleum supplied production of finished gasoline with ethanol content greater than 55%. This is E85, which is allowed to have variable ethanol content to meet driveability and emission requirements.

http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=M_EPM0CAG55_YPR_NUS_MBBL&f=M

EPA also looks at E85 station expansion in some of its analyses of potential E85 consumption, and asserts that “through 2013 the number of stations selling E85 has been increasing at a rate of over 300 stations per year.”⁹⁰ This is incorrect. According to DOE’s Alternative Fuels Data

⁹⁰ See Memorandum from David Korotney to EPA, *Application of one-in-four E85 access methodology to 2015*, EPA-HQ-OAR-2013-0479. See also Proposed Rule at 71760.

Center, the growth in E85 stations has been slowing with almost no growth during 2013 (Table 3). A linear trend analysis is misleading in this situation as well.

Table 3. Number of Stations		
Date of Station Count*	No. of Stations	Increase
Sep-2005	436	-
Mar-2007	1085	649
Mar-2008	1413	328
Jan-2009	1861	448
Feb-2010	1980	119
Feb-2011	2326	346
Jan-2012	2498	172
Feb-2013	2596	98
Jan-2014	2616	20

*Note: The primary data source (below) lists the time at which the station count was taken. Source: Transportation Energy Data Book, Editions 25 through 32, and Alternative Fuel Data Center in January 2014, using public plus private stations.

Another way to explore E85 demand is to use historical data from states that track sales and use these insights to guide projections for the country as a whole. Two states that collect such data are Minnesota and Iowa. Minnesota publishes more detailed data than Iowa. Minnesota has 336 retail outlets selling E85, which represent 12.8% of the nation’s E85 outlets.⁹¹ The number of stations selling E85 increased following initial implementation of the RFS requirements in 2005, but generally leveled out in early 2009 at today’s number. Consistent with this relatively flat station number, volumes sold per station were not constrained by pump throughputs. In 2013, for example, stations offering E85 were selling less than 4,400 gallons per month on average.

Figure 4 shows Minnesota sales of E85 from 2007 through November 2013. The graph shows annual volumes sold vary significantly. In 2011, annual volumes were over 20 million gallons, but dropped more than 25% to under 15 million gallons in 2012. Since 2007, the trend has been down. But 2013 looks as if it could end the year closer to 2011 volumes. Simple trend analyses do not adequately capture the factors impacting these variations, and again illustrate why such analyses are inappropriate for one-year-out projections.

EPA refers to EIA and EMTS⁹² trends during the first half of 2013. The Minnesota data implies that the strong year-over-year growth for the first half of 2013 over 2012 is not a trend, but rather a recovery back to more normal levels. The Minnesota historical data could be interpreted as

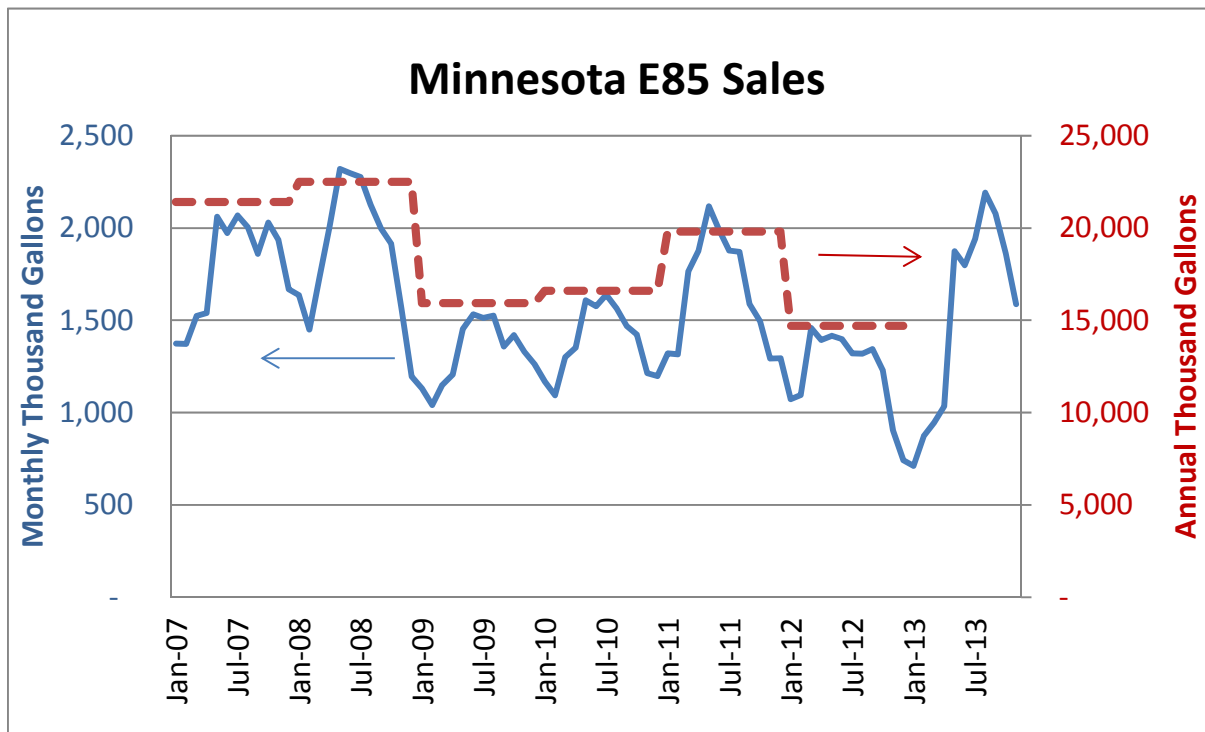
⁹¹ Department of Energy, Alternative Fuels Data Center station count for both public and private stations, http://www.afdc.energy.gov/fuels/ethanol_locations.html

⁹² EPA Moderated Transaction System

pointing towards limited growth in 2014, with the large 2013 growth over 2012 simply being a recovery from the low levels seen in 2012. Also note the seasonal pattern, Sales peak during the summer and bottom out during the winter. If Minnesota is indicative of other E85 consuming areas, it suggests E85 consumption in 2013 was not unusually high, and implies caution when projecting what may happen in 2014.

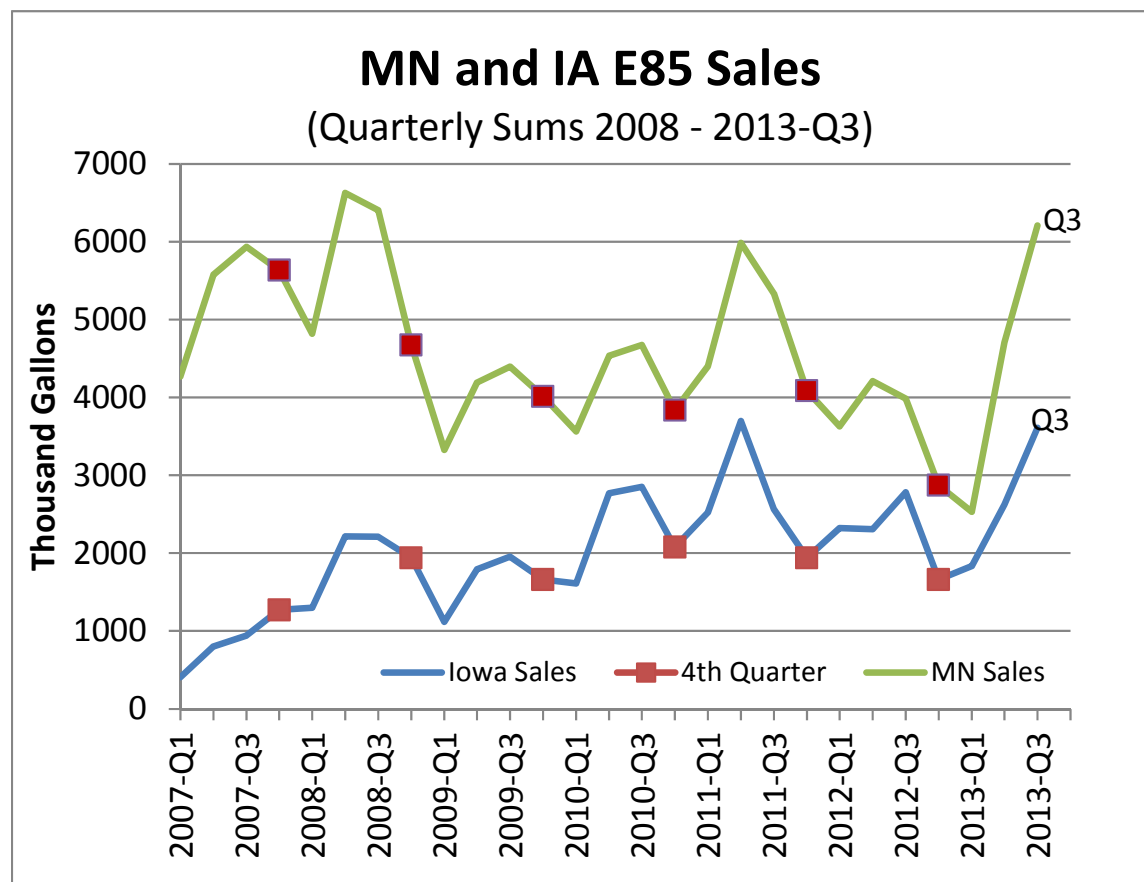
A review of the Iowa E85 sales shows a similar trend as shown in Figure 5. Since Iowa data was only available in quarterly frequency, Minnesota data were aggregated to display on a comparable scale. Figure 5 illustrates that sales volumes vary considerably and that the changes in the second and third quarters of 2013 are not dramatic increases but returns to historical levels. The data also show that fourth quarter volumes fall seasonally, so we would expect the fourth quarter 2013 data to be less than the third quarter data shown.

Figure 4.



Source: Minnesota Department of Commerce, Division of Energy Resources,
<http://mn.gov/commerce/energy/images/E-85-Fuel-Use-Data.pdf>

Figure 5.



Sources: Iowa Department of Revenue, <http://www.iowa.gov/tax/forms/motor.html#E85Qtr>
Minnesota Department of Commerce, Division of Energy Resources, <http://mn.gov/commerce/energy/images/E-85-Fuel-Use-Data.pdf>

In conclusion, sales data from the States of Minnesota and Iowa show that large increases in E85 sales as projected by EPA are not supported by historical data. The limited infrastructure to sell E85 combined with the lack of consumer demand will severely limit E85 consumption in 2014.

As stated in the NPRM, EPA must eventually set volume standards that are single point values based on sound science and credible data analysis. However, as discussed above, the lack of sufficient historical data on E85 consumption has forced the EPA and others⁹³ to rely on a host

⁹³ See e.g., Irwin, S. and Good, D., University of Illinois, *E85 Pricing and Recent Consumption Trends*, June 19, 2013, *farmdocDaily*, <http://farmdocdaily.illinois.edu/2013/06/e85-pricing-recent-consumption-trends.html>; Meyer, S., USDA, Johansson, R., USDA, and Paulson, N., University of Illinois, *E85 and the Blend Wall*, October 4, 2013, *farmdocDaily*, <http://farmdocdaily.illinois.edu/2013/10/e85-blend-wall.html>; Irwin, S. and Good, D., University of Illinois, *Potential Impact of Alternative RFS Outcomes for 2014 and 2015*, December 4, 2013, *farmdocDaily*, <http://farmdocdaily.illinois.edu/2013/12/Potential->

of theoretical assumptions and analogies concerning behavioral, economic, demographic, technological and infrastructure-related factors that are either inapplicable to the U.S., fraught with uncertainty and/or have not been tested or validated empirically. For example:

- It is wholly inappropriate to rely on data generated by Brazilian drivers as a proxy for measuring U.S. drivers' willingness to buy E85 when its price is discounted relative to gasoline, because (as shown particularly by the American Automobile Association fuel price series data) E85 in the U.S. has not been historically priced to generate fuel cost savings. Government intervention in the economy in the form of flexible-fuel vehicle and E85 infrastructure subsidies and control of fuel market prices as seen by the consumer has been long standing, pervasive and indeed, institutionalized in Brazil, in comparison to the U.S.⁹⁴
- There are no data on which to base assumptions regarding the additional fuel cost savings that would be needed to induce owners of flex vehicles who live some distance from an E85 station to fill up at that station.
- The assumption that existing E85 stations can obtain enough E85 and will install enough pumps to fill the demand by owners of flex vehicles is just that: an assumption. First, this assumption ignores the fact, noted recently by the Petroleum Marketers Association of America that "over 94% of the gas stations in the U.S. are owned by independent businesses, and the major oil companies cannot order those retailers to replace dispensers and piping."⁹⁵ Second, clearly, some investment in additional pumps at existing stations would be needed to meet the demand if E85 is heavily discounted, and the range of such investments could potentially be significantly higher than the averages assumed in recent studies.⁹⁶
- Estimates of the tradeoff between RIN prices and investments in new E85 stations are predicated on assumptions about ethanol production costs that are based on current market conditions. It is well known, however, that the cost of ethanol production has been extremely variable over the past few years. For instance, the cost of corn a year ago

[Impact-Alternative-RFS-2014-2015.html](#); Babcock, B.A. and Pouliot, S., Iowa State University, *Feasibility and Cost of Increasing US Ethanol Consumption Beyond E10*, January 2014, CARD Policy Briefs, 14-PB 17; Babcock, B.A. and Pouliot, S., Iowa State University, *Price it and They Will Buy: How E85 Can Break the Blend Wall*, August 2013, CARD Policy Briefs, 13-PB 11.

⁹⁴ Platts, *Brazil's pump ethanol prices rise in most states on gasoline hike*, December 10, 2013,

<http://www.platts.com/latest-news/agriculture/london/brazils-pump-ethanol-prices-rise-in-most-states-26537349>

⁹⁵ *Wall Street Journal*, March 20, 2013,

<http://online.wsj.com/news/articles/SB10001424127887324323904578370170512486896?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424127887324323904578370170512486896.html>

⁹⁶ *See e.g.*, NACS and SIGMA, (March 27, 2006),

http://www.nacsonline.com/Issues/MotorFuels/Testimony%20%20Comments/E85_Letter_032906.pdf; NREL, *Cost of Adding E85 Fueling Capability to Existing Gasoline Stations: NREL Survey and Literature Search*, <http://www.afdc.energy.gov/pdfs/42390.pdf>

was over \$7/bushel or nearly 75% higher than it is today.⁹⁷ Sensitivity analysis to account for this variability should be employed in any analysis of tradeoffs between RIN price and E85 infrastructure investment.

In summary, the key problems with studies that rely on the use of RINs to shift consumer behavior is that they ignore the negative economic impacts that would result from RFS policy-driven resource reallocation. By heavily focusing on end-use consumer behavior, they miss the mark because consumers are not an obligated party to the RFS. They also appear to misunderstand how the annual RFS rulemaking process, combined with a RIN's 2-year life, results in market dynamics where a perceived RIN shortage in the following year could increase a RIN's value in the current year. By positing significant increases in E85 demand in the near term, these analyses gloss over the potential for severe market disruptions and consequent economic harm resulting from a strain on current infrastructure.

Another example of a shortcoming in EPA's discussion is lack of recognition of the difference between sales growth in a mature market and market penetration of a new fuel. EPA says, "A survey conducted by the National Association of Convenience Stores found that 71% of customers indicated that price was the most important factor in determining where they buy gasoline."⁹⁸ The switch from gasoline to E85 is a market penetration issue, and not simply a gasoline price choice. It involves infrastructure expansion throughout the country (including vehicles), and even in areas where more pumps are available, it requires both consumer and retailer acceptance.

3. E15 is Not a Viable Solution to the Blendwall

EPA is correct in its assessment that the volume of E15 that is consumed in 2014 will be negligible, and thus, was not included in the projected composition of 2014 gasoline supply.⁹⁹

As described in the Waiver Petition, E15 is not a viable solution to the E10 blendwall because it is incompatible with the existing vehicle fleet.¹⁰⁰ For automobiles built before 2011, automobile manufacturers are unanimous in stating that the use of E15 may damage vehicle engines and will void warranties. In addition, E15 is incompatible with the existing refueling infrastructure. Prior to 2010, Underwriters Laboratories (the primary NRTL) had not listed a single dispenser as compatible with any alcohol concentration greater than 10 percent. Given that dispensers have useful lives greater than 20 years means the majority of dispensers in the country are not compatible with E15. Issues also exist with the underground storage tanks and piping systems. Over 94% of the gasoline stations in the country are independently owned and are beyond the

⁹⁷ U.S. Department of Agriculture,
<http://search.ams.usda.gov/mndms/2014/01/LS20140117WETHANOL.pdf>

⁹⁸ Proposed Rule at 71760.

⁹⁹ "Therefore, to simplify the calculations and the discussion, we have assumed that the volume of E15 that is consumed in 2014 will be negligible, as there are currently very few retail stations offering E15." Proposed Rule at 71758-59.

¹⁰⁰ See Waiver Petition, Section III.B., p. 17 (Appendix A).

control of the obligated parties to require investments to make them compliant.¹⁰¹ Finally, the potential liability issues associated with marketing the fuel will hinder E15 introduction. The combined effect of these three elements is that E15 is not a viable alternative for the near future as changes in the vehicle fleet and infrastructure could take several years to implement.

In 2014 and in future years, EPA must factor in the risks and potential liabilities presented by E15 in terms of vehicle and infrastructure incompatibility. EPA must never enforce a rule that seeks to require the manufacture and sale of a fuel product (E15) that:

- Could damage engines and other systems in millions of vehicles that have been “approved” by EPA for E15, but which are unapproved by the vehicle manufacturers and for which use may void the vehicle warranty;
- Is illegal and unavailable for tens of millions of other automobiles, trucks, off-road vehicles, boats and small-equipment products, and which will decrease the availability of the gasoline required by owners of these products;
- Results in fewer miles-per-gallon for most vehicles, thus reducing vehicle efficiency at a time when the federal government is promulgating aggressive vehicle efficiency standards;
- Is incompatible with, and thus cannot legally be stored in or dispensed from, the vast majority of the existing gasoline retail distribution system, thus forcing thousands of small business owners to either incur enormous costs to upgrade their systems or run the economic and environmental risks posed by carrying an incompatible product; and
- Requires obligated party manufacturers and importers, fuel suppliers, distributors and retailers, engine and vehicle manufacturers, and many others, to face potential liabilities and litigation all for complying with the federal mandate.

4. Total Ethanol Consumption is Near 9.7% of Gasoline Demand

Given that we are currently at the blendwall, EPA should keep E85 assumptions conservative in light of the uncertainty in E85 current use and potential for higher penetration. Current E85 together with E10 demand have pushed total ethanol use to 9.7% by volume of the gasoline pool. If gasoline demand is higher than projected, more ethanol volume can be used, but if that demand is lower, the remaining RIN carryover and flexibility to use RINs, such as surplus D4s, will be required to satisfy the mandated volumes. The downside risk of setting the mandate too high is “crossing” the blendwall, which will cause RFS compliance to be infeasible and will create significant economic harm. We believe that EPA should exercise caution in this regard and be conservative in setting the total renewable fuel standard to avoid such disastrous

¹⁰¹ Gilligan, Dan. Statement to U.S. Senate, Energy and Natural Resources Committee, *To explore the effects of ongoing changes in domestic oil production, refining and distribution on U.S. gasoline and fuel prices*, Hearing, July 16, 2013. Found at http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=57e91a3d-9cc4-4872-b1ee-b0c105169177. Accessed January 27, 2014

consequences. Moreover, we note that if EPA sets the RFS at too low a level, obligated parties will have the incentive to blend additional amounts of ethanol to increase the amount of RINs they may carryover for RFS compliance obligations in 2015.

Including all E10 and higher blends (e.g., E85), the total ethanol volume used in both 2012 and 2013 (through September – most recent data available) represented 9.7% of gasoline consumed as shown in Table 4. As discussed earlier in this report, the 9.7% results in part from the need for E0. E85 market penetration would likely not be quick enough in the short term to provide adequate ethanol volumes to increase the 9.7% figure.

	Gasoline Consumption (Million Barrels)	Ethanol Consumption (Million Barrels)	Ethanol Percent of Gasoline
2012	133.5	12.9	9.7%
Jan-Sep 2013	100.7	9.8	9.7%

Note: Gasoline consumption is EIA finished gasoline product supplied, which includes E0, E10 and all higher ethanol blends such as E85; ethanol consumption includes all fuel ethanol consumed, and only available through September 2013 as of January 7, 2014.
Sources: EIA Petroleum Supply Monthly, Table 2, and Monthly Energy Review, Table 10.3.

Using EIA’s earlier gasoline forecasts, 9.7% of 2014 gasoline consumption resulted in 12.9 billion gallons of ethanol from all sources (corn-based, cellulosic, sugar-based, etc.) and from all ethanol blends. The December 2013 EIA Short-Term Energy Outlook is projecting higher gasoline demand for 2014 than prior EIA monthly STEO projections. Applying the 9.7% aggregate blendwall percent to the December projection results in just under 13.0 billion gallons of ethanol use for 2014. This falls within EPA’s proposed range of 12.95 – 13.09 billion gallons for 2014 (Table IV.B.4-1 in the NPRM).¹⁰²

B. Cellulosic Biofuels

Based on historical plant performance, we believe that EPA’s projections of startup dates, ramp up rates, and the production volumes of cellulosic biofuel facilities continue to be overly optimistic. EPA is increasingly aware of the significant uncertainty in predicting fuel production from “first of kind” cellulosic biofuel facilities, and needs to greatly improve its characterization of that uncertainty. The D.C. Circuit Court’s decision vacating the 2012 cellulosic biofuel

¹⁰² Proposed Rule at 71767.

standard requires EPA to employ a neutral methodology for setting future cellulosic biofuel standards.

1. Cellulosic Biofuel from Existing Pathways

The degree of over-optimism in previous EPA rulemakings can be seen in 2011, 2012, and 2013 RFS final rulemakings (Table 5 below). For example, in 2011 EPA projected cellulosic production equivalent to 21% of the cumulative design capacities of the plants included in the 2011 RFS standards rule; actual production was 0%. In 2012, EPA projected cellulosic production equivalent to 33% of the cumulative plant capacities, when actual production was almost zero. In 2013, EPA projected cellulosic production equivalent to 24% of the cumulative plant capacities, when actual production rate was approximately 2.76%.

EPA's proposed cellulosic biofuel volume of 17 million gallons for 2014 is equivalent to 45% of EPA's estimate of the maximum capacity for the year.¹⁰³ As the following analyses show, EPA's probabilistic assumptions in the proposed new methodology that involves Monte Carlo Simulations remain overly optimistic.

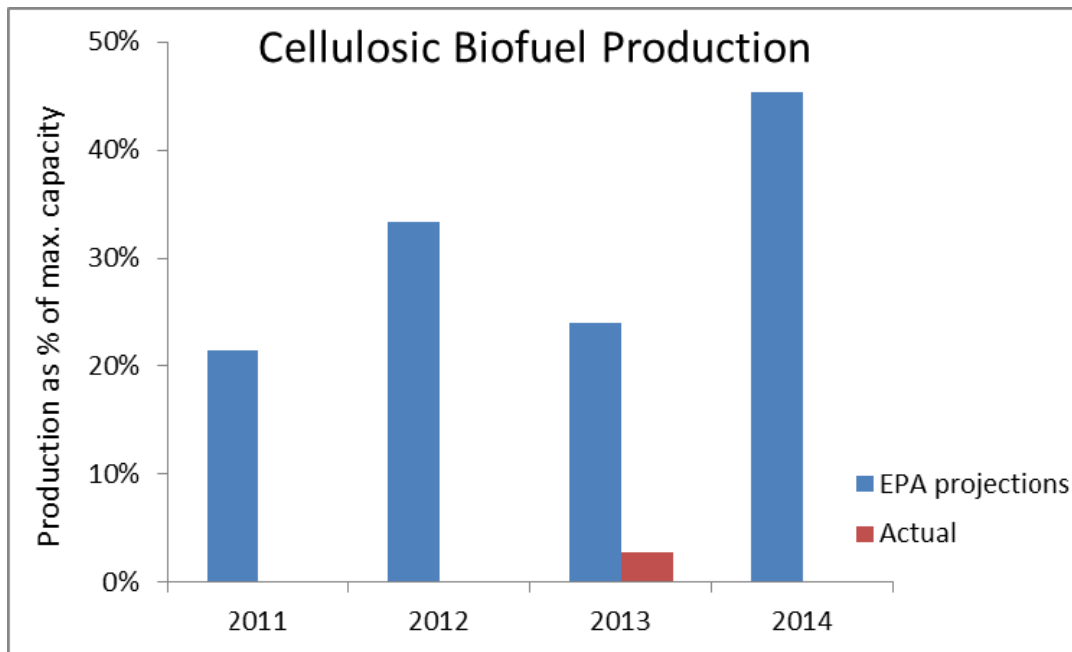
¹⁰³ See Proposed Rule at 71750, Table II.C-2.

Table 5. EPA and EIA Cellulosic Biofuel Projections vs. Actual Production

2011	Fiberight LLC	KioR	INEOS Bio	Range Fuels	Total		
Design capacity (million gallons per year)	6	10	8	4	28		
EIA volume (million gallons)	2.8			1.0	3.76		
EIA utilization (% of design capacity)	46%			25%			
EPA volume (million gallons) in final rule	2.8	0.2		3.0	6		
EPA utilization in final rule (% of design capacity)	47%	100%		75%	21%		
Actual total production (million RINs)					0		
Actual utilization rate (% of capacity)					0%		
2012	Fiberight LLC	KioR	INEOS Bio	Total			
Design capacity (million gallons per year)	6	10	8	24			
EIA volume (million gallons)	1.6	2.0	3.1	6.7			
EIA utilization (% of design capacity)	27%	20%	39%				
EPA estimated start-up timing	1Q'12	2012	1Q'12				
EPA volume (million gallons) in final rule	2.0	3.0	3.0	8			
EPA utilization in final rule (% of design capacity)	33%	30%	38%	33%			
Actual production (million RINs)				0.02181			
Actual utilization rate (% of capacity)				0.09%			
2013	Fiberight LLC	KioR	INEOS Bio	Total			
Design capacity (million gallons per year)	6	11	8	25			
EIA volume (million gallons)		4.0	0.0	4			
EIA utilization (% of design capacity)		36%	0%				
EPA estimated start-up timing	1Q'14	1Q'13	2Q'13				
EPA volume (million gallons) in final rule		5.0	1.0	6			
EPA utilization in final rule (% of design capacity)		45%	13%	24%			
Actual production (million RINs) thru Nov.				0.690539			
Actual utilization rate (% of capacity)				2.76%			
2014 proposal	Fiberight LLC	KioR	INEOS Bio	Abengoa	DuPont	Poet	Total
Design capacity (million gallons per year)	6	11	8	24	30	25	98
EIA volume (million gallons)		N/A	N/A	N/A	N/A	N/A	N/A
EIA utilization (% of design capacity)		N/A	N/A	N/A	N/A	N/A	N/A
EPA estimated start-up timing	unkown	1Q'13	3Q'13	1Q'14	2H'14	1H'14	
EPA volume (million gallons) max. annual capacity in proposed rule		5.5	6.0	18	2	6	37.5
EPA volume (million gallons) in proposed rule							17.0
EPA utilization in proposed rule (% of EPA's upper limit estimate)							45%
EPA utilization in proposed rule (% of design capacity)		50%	75%	75%	7%	24%	17%

Figure 6 below is based on the data in Table 5 and shows actual cellulosic biofuel production and EPA's projection as percent of maximum capacity in rulemakings for years 2011 to 2014.

Figure 6



We discuss some of the contributing factors supporting this conclusion below.

2. Unrealistic Production Ramp-Up Assumptions

In order to calculate the high volume for each given production range, EPA assumes a high end production ramp up to nameplate capacity over a 6 month period. Based on actual experience from the only three operational commercial cellulosic facilities to-date, this assumption is unrealistic:

- KiOR has been producing cellulosic fuel for approximately 9 months. To date, based on EMTS data, they have achieved production levels less than 10% of nameplate capacity of 11 million gallons.
- Ineos Bio announced start-up at the end of July 2012. Based on EMTS data (derived by subtracting KiOR volumes), production, if any, is very small.
- Beta Renewables announced the first shipment of fuels in June 2013. Based on EMTS data (derived by subtracting KiOR volumes), production is very small.

EPA provides no evidence to validate the ramp up 6-month assumption in this Proposed Rule and even acknowledges that “Experience to date with cellulosic biofuel production facilities is that historically they have been unable to achieve announced start up dates and production volumes in their first few years of expected production.”¹⁰⁴ As cellulosic biofuel production data

¹⁰⁴ 78 Fed. Reg. at 71739.

become available, EPA should rely on producers' demonstrated ability to increase plant production rates. If the first three companies listed above are predictors of future performance, a 6-month ramp-up has no foundation in the empirical evidence for cellulosic biofuel production. For each of the past 3 years, EPA has predicted that KiOR, INEOS, and Fiberight would be producing significant quantities of cellulosic fuel. EPA now discards the fact that a 3-year ramp-up proved to be an inadequate amount of time for this new technology to produce commercial scale quantities of cellulosic biofuels and assumes that a 6-month ramp-up is reasonable. The use of a 6-month ramp-up in the face of this historical track record is arbitrary and capricious.

At the low end of EPA's cellulosic biofuel volume assessment, the Agency recognizes that any facility could produce zero. But in the Monte Carlo simulations using in this NPRM, EPA assigns a 5% probability of a zero production rate for all of the cellulosic facilities. Based on historical data, this probability assumption is too low. Furthermore, these cellulosic plants deploy first of a kind technologies, and the financial stability of these companies needs to be taken into consideration. The unfortunate reality is that the chance of a producer shutting down due to financial factors is far from unlikely (*e.g.*, Range Fuels).

3. Facility Commissioning Period

We agree with EPA's statement that accounting for a startup and commissioning period between completion of construction and initial commercial-scale production of biofuels is appropriate. However, in EPA's analysis the assumed commissioning period is either unrealistically short or non-existent. Historically, first-of-a-kind facilities (KiOR, Ineos Bio, Beta) have taken much longer than 6 months between completion of construction and initial production of commercial volumes of cellulosic biofuels. None have reached nameplate capacity within that period. In one example, the commissioning period for Beta was approximately 13 months, and there is no documentation that Beta has reached production at nameplate capacity volumes. Ineos announced completion of construction in July of 2012, yet 18 months later has still is not known to have generated any cellulosic ethanol RINs, citing "several unexpected start-up issues". KiOR also began startup almost 18 months ago and is at less than 10% of nameplate capacity.

4. Other Limiting Factors

EPA acknowledges that a variety of factors may limit the production of cellulosic biofuels. Since the time of their assessment, a number of construction delays have occurred thus impacting their estimated production volumes.

EPA needs to use credible data inputs to its methodology. Instead, EPA continues to mainly rely on forecasts prepared by cellulosic biofuel producers, which have been consistently wrong every year (see Table 5 above). The erratic performance of the first handful of companies that have begun production underscores the validity of using demonstrated production to set the cellulosic standard. We continue to recommend that EPA use three consecutive months of actual production data when setting the annual cellulosic biofuel standard.

5. Comments on Ten Cellulosic Biofuel Production Facilities

EPA lists 10 companies as potentially contributing to 2014 cellulosic biofuel volumes, but only four are likely to actually produce much fuel. Below is a general assessment of each company EPA lists based on press reports and other public sources. EPA rightly excluded several companies from the 2014 proposal. Yet the information below calls into question the ability of the companies EPA is relying on to produce fuel in 2014, and further demonstrates that company statements should be viewed with skepticism.

1) **Abengoa**: Construction started on their Hugoton, KS plant in September 2011, at which time the plant was scheduled to come on line in September 2013. EPA indicates that based on email from Abengoa on June 26, 2013, the plant would begin ethanol production in January 2014, expected to produce at nameplate capacity by the end of the second quarter and would produce about 17-20 million gallons of fuel in 2014. Based on that information, EPA is predicting 0-18 million gallons of production from Abengoa. However, in mid-November, Abengoa has indicated that its plant was 92% complete and that it expects to begin cellulosic production by April 2014, so its target date has slipped again by several months.¹⁰⁵ The midpoint of EPA's range is likely biased towards the high end, especially given the highly uncertain prediction of actual completion of construction and the expanded period for commissioning.

2) **Cool Planet Biofuels**: EPA notes that this company expects to build its first facility in 2014, and be producing renewable gasoline by the end of the year, with up to 10 million gallons of annual capacity. EPA is skeptical that actual production might actually occur, and appropriately does not include any production from Cool Planet its 2014 RFS. In late August, Cool Planet announced that it intended to build its first facility (10 mmgy) in Alexandria, Louisiana, noting that it expected to finish construction by the end of 2014. No evidence of this company obtaining funding to begin construction of its small modular units was found in our review, and so it is highly unlikely that there will be any production.

3) **DuPont**: DuPont started construction on a 30 million gallon facility in late November 2012, and expects to complete construction by the end of the June, 2014. The company projects production of 3 million gallons of cellulosic ethanol; EPA expects 0-2 million gallons. Given DuPont's expertise in developing new technologies, this facility could achieve some production.

4) **Fiberight**: EPA expected that Fiberight might complete their 2 million gallon plant by March 2010, and produce fuel before the end of that year, and included Fiberight in the 2010 cellulosic RFS. EPA also included this in the 2011 and 2012 RFSs. The facility still has not been built, and EPA rightly does not include any 2014 production by Fiberight. We support EPA's decision to exclude Fiberight's production volumes from its 2014 estimates.

5) **INEOS Bio**: INEOS completed construction of their 8 million gallon facility in June of 2012, over 18 months ago, and announced on July 31, 2013 that they were beginning production of

¹⁰⁵ Voegelé, Erin, "Abengoa to begin cellulosic ethanol production in April." Ethanol Producer Magazine, <http://www.ethanolproducer.com/articles/10469/abengoa-to-begin-cellulosic-ethanol-production-in-april> (accessed January 17, 2014).

cellulosic ethanol. INEOS was expected to produce 4-5 million gallons of fuel in 2013, but based on the NPRM it appears as if INEOS has not produced anywhere near that amount. According to EMTS, through November 2013, a total of only 433,824 gallons (690,359 RINs) of cellulosic biofuel were produced across the entire industry in 2013. EPA projects that in 2014 INEOS will produce 2-5 million gallons and the low end is likely too high. For example, on December 6, INEOS released an update on this facility,¹⁰⁶ indicating it “has made significant operational progress.” The company also noted: “Bringing the facility on-line and up to capacity has taken longer than planned due to several unexpected start-up issues at the Center. These efforts have highlighted some needed modifications and upgrades.”

6) **KiOR:** Construction was completed in May 2012 at their 11 million gallon plant in Columbus, MS and at that time the company expected to begin production by September 2012. First production at Columbus was announced in March 2013. EPA notes that in August KiOR reduced their expected 2013 production from 3-5 million gallons downward to 1-2 million gallons and for the year produced the following mix of fuel: cellulosic gasoline (35%), diesel fuel (40%) and heating oil (25%).¹⁰⁷ In late December 2013, KiOR stated their 2013 production would fall under one million gallons. In early January 2014, KiOR announced the Columbus plant would limit production during the first quarter of 2014 and would focus on optimization improvements. EPA projects 2014 KiOR production to be between 0-5 million gallons (or 0-9 million ethanol-equivalent gallons) with the high end based on operating at 50% of nameplate capacity on average throughout 2014, which now seems unlikely given the KiOR’s limited production during the first quarter. During 2013, KiOR ran at approximately 8% of nameplate capacity.

7) **LanzaTech:** LanzaTech purchased the Range Fuels facility, and EPA does not expect any production from this company until possibly late in 2014. We support EPA’s decision to exclude LanzaTech production volumes from its 2014 estimate.

8) **POET:** POET began construction a plant in Iowa in March 2012, and recently indicated it intends to complete construction and begin the commissioning process in the first quarter of 2014. EPA expects POET to produce between 0-6 million gallons, while POET has stated that it expects to produce between 7-12 million gallons in 2014. It is possible the company could reach the midpoint of EPA’s predicted range if construction and commissioning target timelines remain on schedule. However, given that this facility has not yet completed construction, there is significant uncertainty in including these volumes in the cellulosic biofuel mandate for 2014.

9) **Sweetwater Energy:** There is little information publicly available on this company. EPA indicates Sweetwater intends to construct add-on facilities at existing corn ethanol plants producing between 0-2 million gallons in 2014. But EPA also notes that this fuel would not qualify for cellulosic RINs. Evidence of any construction in the planning stages or getting started was not found, and production is unlikely in 2014.

¹⁰⁶ <http://www.ineos.com/en/businesses/INEOS-Bio/News/INEOS-Bio-Provides-Operational-Update/>

¹⁰⁷ <http://investor.kior.com/releasedetail.cfm?ReleaseID=815660>

10) **Ensyn:** Ensyn indicates that it has facilities that could provide up to 3 million gallons in 2014 of renewable heating oil. Ensyn has been operating these facilities for several years. EPA projects between 0-3 million gallons in 2014, but also notes several issues that Ensyn must resolve regarding feedstocks, production and fuel quality. We support EPA's decision to exclude Ensyn's production volumes from its 2014 estimates.

6. A Final Rule Cannot Be Based On Unknown Regulatory Determinations

The Proposed Rule relies on the hypothetical outcome of another rulemaking¹⁰⁸ for determining the final standards that will apply to obligated parties in 2014. More specifically, the Proposed Rule references the possible approval of a new pathway for compressed natural gas and liquefied natural gas producers using biogas from landfills. EPA notes that the production potential of this type of cellulosic biofuel is very large given the number of landfills in the United States. Thus, while the Waiver Petition suggests that the cellulosic biofuel mandate should be set at actual production (*i.e.*, less than 1 million gallons) and the Proposed Rule includes a range of up to 30 million ethanol equivalent gallons, the Agency indicates that "if EPA finalizes the pathways discussed in the recent proposed rulemaking before the applicable volume of cellulosic biofuel is finalized, volumes of fuel from companies intending to utilize these pathways may be included in our projected available volume for 2014."¹⁰⁹ EPA should not include pathways that have not yet been approved before the commencement of the compliance year when finalizing the 2014 RFS volume standards.

In 2013, API/AFPM submitted detailed comments to EPA's proposed rule for new pathways. Excerpts from the API/AFPM cover letter are shown below:

As our detailed comments and data analyses show, EPA's proposal has significant scientific shortcomings. EPA ignored variability in literature data, used overly optimistic assumptions and wrong baselines in their lifecycle analysis (LCA) calculations, and in many cases made assertions without any supporting data. Furthermore, EPA used a very broad, expansive interpretation of the cellulosic definition in EISA. As an example, renewable electricity from landfill gas is not cellulosic alternative fuel. This and other aspects in the proposed rulemaking are particularly troubling and could potentially lead to the proliferation of invalid RINs. For example, how would an obligated party be assured that renewable electricity from landfill biogas is actually used for transportation purposes by electric vehicles? This end use verification was not contemplated by EPA's recently proposed rulemaking "RFS Renewable Identification Number (RIN) Quality Assurance Program" (Federal Register, vol. 78, pages 12158-12217).

¹⁰⁸ *Regulation of Fuels and Fuel Additives: RFS Pathways II and Technical Amendments to the RFS 2 Standards; Proposed Rule*, 78 Fed. Reg. 36,042 (June 14, 2013).

¹⁰⁹ Proposed Rule at 71751.

The statute clearly requires that cellulosic biofuel be “derived from any cellulose, hemicellulose, or lignin,” as required by 42 U.S.C. § 7545(o)(1)(E). EPA’s proposal to inflate cellulosic biofuel volumes would violate EPA’s obligation to follow clear statutory language, as well is its obligation to “take neutral aim at accuracy.” *API v. EPA*, 706 F.3d at 476.

* * * *

For these reasons and others detailed in our comments, EPA should: (a) withdraw the proposed new RFS pathways; (b) re-assess them in a manner that both adheres to the statutory EISA definitions and employs lifecycle analysis based on consistent sound science data, a range of realistic scenarios and consideration of uncertainty.¹¹⁰

Elsewhere in the Proposed Rule, EPA notes that approval of the pathway for cellulosic biofuel RIN generation is limited by “companies’ ability to demonstrate the use of the biogas as transportation fuel” and references 40 C.F.R. 80.1426 requirements for generating RINs from biogas.¹¹¹ EPA also states that the Proposed Rule explicitly assumes that “the pathways are all approved as of January 1, 2014. Approval subsequent to that date would reduce potential volumes, depending on the producer at issue.”¹¹² But nowhere in the Proposed Rule does EPA explain how determinations of such reductions would be made for individual companies, or whether EPA would calculate revised standard distributions to project cellulosic biofuel production in 2014 in addition to the two projections included in the rule (for which further Monte Carlo simulation is conducted to arrive at the proposed range).

Thus, it appears that EPA is trying to set up the following scenarios:

- (1) EPA may finalize a standard based on 0 to 9 million gallons from the Monte Carlo analysis of facilities that have approved pathways.
- (2) EPA may ignore the analysis and finalize a different standard outside the proposed range of 0 to 9 million gallons, if the Agency, at any point prior to the final rule, finalizes another rule approving new pathways for all producers.
- (3) EPA may finalize a different standard entirely, if it chooses to approve some, but not all pathways (based on a company’s ability to demonstrate the use of biogas as transportation fuel). In this case, EPA would finalize a standard based only on the specific companies (unknown at this time) who could make such a demonstration to EPA’s satisfaction.

¹¹⁰ EPA Docket No. EPA-HQ-OAR-2012-0401

¹¹¹ Proposed Rule at 71744

¹¹² Proposed Rule at 71744, nt. 14.

The common denominator in scenarios (2) and (3) is that nothing in the Proposed Rule lets potential commenters know when, if, or how EPA will act in this matter. Nor do scenarios (2) and (3) indicate how the timing of EPA's actions on the pending proposed pathways will affect the final RFS standard for cellulosic biofuel (*e.g.*, how EPA might adjust ranges in the proposed rule based on when the specific pathways are approved). This renders the idea of notice as wholly meaningless, obviating EPA's obligation to provide regulated parties with some ability to consider and comment on the specific implications of a regulatory proposal.

Although EPA may issue final rules that are "logical outgrowths" of and not identical to proposed rules,¹¹³ EPA may not issue a proposed rule that is so broad that it prevents effective comment of adequate notice as to EPA's intentions for the final rule. "If the APA's notice requirements mean anything, they require that a reasonable commenter must be able to trust an agency's representations about *which particular aspects* of the proposal are open for consideration. A contrary rule would allow an agency to reject innumerable alternatives in its Notice of Proposed Rulemaking only to justify *any* final rule it might be able to devise by whimsically picking and choosing within the four corners of a lengthy notice."¹¹⁴

In the current proposal, commenters do not know when or whether EPA will approve the new RIN pathway for use of biogas as cellulosic transportation fuel or how EPA may decide issues that will determine whether valid RINs can be generated. In the rulemaking regarding these pathways, EPA is proposing new definitions for renewable CNG and LNG,¹¹⁵ new registration requirements,¹¹⁶ new contract requirements for tracking the biogas through the distribution system, a new process for how EPA will determine what company along the distribution chain is the "producer" who is actually eligible to generate RINs¹¹⁷ and new requirements for the production process.¹¹⁸ Until EPA decides these issues that are intrinsic to the ability to produce cellulosic RINs, it is impossible to comment on the basis for EPA's final determination, in this rulemaking, of the applicable volume and percentage standards for cellulosic biofuel that will apply in 2014.

Moreover, since EPA must base its cellulosic biofuel waiver decision in CAA section 211(o)(7)(D) on the estimate provided by EIA of cellulosic biofuel production, commenters under EPA's proposed plan of action will be unable to examine or provide comment on EIA's evaluation of cellulosic biofuel projected to be sold or introduced into the United States (as presumably altered by this unknown, future action by EPA to approve the new pathways).¹¹⁹

¹¹³ See *Fertilizer Institute v. EPA*, 935 F.2d 1303 (D.C. Cir. 1991), *Env'tl. Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005).

¹¹⁴ *Env'tl. Integrity Project v. EPA* at 998.

¹¹⁵ 78 Fed. Reg. at 36054

¹¹⁶ *Id.*

¹¹⁷ *Id.* at 36055.

¹¹⁸ *Id.*

¹¹⁹ See Proposed Rule Table II.B.4-1, where EPA indicates only that those cellulosic biofuel producers are in "various" locations with "various" design capacities and the date of production is "N/A". Proposed Rule 71745-46

Fundamentally, EPA cannot “give notice” of actions that neither the Agency nor EIA have yet to undertake which may occur after the commencement of the 2014 compliance year.

There is no information in the Proposed Rule about how EPA has or will consider the individual company projections of the newly approved producer pathways. Nor is there any information on how EIA might view these newly qualified producers. Thus, EPA will not have given notice on what level of total cellulosic biofuel production it was proposing to determine is reasonable, in conformance with its statutory directive to base such levels on projection of cellulosic biofuel production.

C. EPA Does Not Have the Authority to Increase the Biomass-Based Diesel Requirements for 2014 or 2015

API and AFPM support EPA’s proposal to establish the annual biomass-based diesel volume at no more than 1.28 billion gallons for 2014 and 2015 and are pleased to see EPA addressing the 2015 biomass-based diesel standard in this rulemaking. Obligated parties require the certainty of having final RFS standards prior to the start of the compliance year – as the Clean Air Act clearly requires EPA to do – in order to make operational, logistics, and investment decisions.

The expiration of the \$1.00 per gallon tax credit may have a significant impact upon biodiesel production volumes in 2014. If EPA increases the biomass-based diesel volume standard while the supply of biomass-based diesel simultaneously decreases due to the loss of tax credit, there may not be sufficient RINs available in the marketplace. It is not appropriate for EPA to increase the biomass-based diesel volume standard due to this uncertainty.

The 2014 biomass-based diesel RFS does not restrict additional biomass-based diesel from being sold in the market. Biomass-based diesel producers are able to sell as much of their product as consumers will demand. The nesting of renewable fuel requirements in the EISA mandate allows discretionary volumes of biomass-based diesel to be consumed, if biomass-based diesel is cost-competitive with alternative advanced biofuels and renewable biofuels. Setting a higher level for the biomass-based diesel standard within the advanced biofuels mandate achieves no incremental benefit, while it limits compliance flexibility and potentially increases compliance costs. Since incremental volumes of biomass-based diesel can be used to demonstrate compliance in the advanced biofuel category, EPA should not go beyond 1.28 billion gallons in 2014 and 2015. The consumer should choose which fuel is most effective for this space.

Section 211(o) of the Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to promulgate annual standards for four categories of renewable fuel (*i.e.*, total renewable fuel, advanced biofuel, biomass-based diesel and cellulosic biofuel) not later than November 30 of the preceding year. This lead time provides regulatory certainty not only to fuel producers and importers who must comply with the government mandates but also to the renewable fuel producers.

CAA section 211(o)(2)(B) specifies the volumes for the categories of total renewable fuel, advanced biofuel, and cellulosic biofuel that must be consumed through calendar year 2022. For biomass-based diesel, however, section 211(o)(2)(B)(i) does not prescribe specific statutory volumes after 2012. Instead, CAA section 211(o)(2)(B)(ii) sets a 1 billion gallon floor and requires EPA to establish the annual volume requirements based on an analysis of six statutory criteria (*i.e.*, environmental impact, energy security, expected production, impact on infrastructure, cost to consumers, and certain other factors such as food prices and rural development). Because the required volumes for biomass-based diesel are not specified in statute and evaluative process is required, CAA section 211(o)(2)(B)(ii) expressly requires EPA to provide 14-months lead time when establishing such requirements. Specifically, under this provision:

The Administrator shall promulgate rules establishing the applicable volumes under this clause no later than 14 months before the first year for which such applicable volume will apply.

Thus, EPA was required to have determined the 2014 biomass-based diesel applicable volume by October 31, 2012 and the 2015 volume by October 31, 2013. Clearly EPA has not met this deadline for either 2014 or 2015 biomass-based diesel requirements and compliance with the required lead time is impossible. EPA also has not undertaken the “six factor” analysis required under CAA section 211(o)(2)(B)(ii) for 2014 or 2015, a condition precedent to establishing or increasing the applicable volume of biomass-based diesel for years after 2012, nor has the Agency completed the required coordination with the Secretary of Energy and the Secretary of Agriculture.¹²⁰

This raises the issue of what level of biomass-based diesel can be required in 2014 and 2015. The language in section 211(o)(2)(B)(ii) is clear and must be read to mean that EPA cannot exceed its most recent determination for 2013 of 1.28 billion gallons, since this is the highest volume for which obligated parties have had the requisite advance notice.¹²¹ Indeed, the soonest that EPA can go beyond the 1.28 billion gallons would be 2016, providing it complies with the 14 month lead time requirement and issues a final rule by October 31, 2014. Any higher applicable volume for biomass-based diesel (or percentage standard based on this volume) would be contrary to the plain language of the statute.

The U.S. Court of Appeals for the District of Columbia Circuit previously considered whether EPA could issue RFS rules after the statutory deadline.¹²² While the court held that EPA had not

¹²⁰ Instead, EPA indicates that, “[w]e do not expect that there would be a significant difference between additional volumes of biomass-based diesel above 1.28 bill gal and other advanced biofuels, as far as the overall impact of those fuels in terms of the factors we are required to consider under section 211(o)(2)(B)(ii). Any such differences would also be hard to quantify.” Proposed Rule at 71753.

¹²¹ We would note that even using the 2013 determination would not explicitly satisfy the requirement of CAA section 211(o)(2)(A)(ii) that the Administrator determine applicable volumes for “calendar years after the calendar years specified in the tables” since EPA’s determination was with respect to the year 2013.

¹²² See *National Petrochemical & Refiners Association v. EPA*, 630 F.3d 145 (2010).

forfeited the authority to issue biofuel standards at the statutorily-required levels merely because it missed the rulemaking deadline, that case is easily distinguished from the facts presently at issue.

First, *NPRA v. EPA* involved the interpretation of a different statutory provision. The statutory provision at issue in the case was CAA 211(o)(2)(B)(i), which sets forth specific quantities of biomass based diesel to be blended in 2009 and 2010. Today, however, EPA must apply the authority found at 211(o)(2)(B)(ii) to promulgate biomass-based diesel standards based on its analysis of factors enumerated in the statute. The fact that the statute set forth specific volumetric requirements in 2009 and 2010 in the *NPRA* case is significant, because it enabled the court to reason that obligated parties were put on notice as to what their biomass-based diesel blending requirements would be prior to the promulgation of a final rule. There is no such notice here. Instead, the statute establishes a 1 billion gallon floor and EPA has determined that in 2013, the applicable volume for biomass-based diesel should be 1.28 billion gallons. Thus, obligated parties have no other context in which to determine, consistent with the statute, what the applicable volume will be in 2014 and 2015.

Second, *NPRA v. EPA* involved the implementation of a new program - the transition from RFS1 to RFS2 following the passage of EISA. Among other changes, EISA included a brand new mandate for biomass-based diesel that had not existed under RFS1. In this context, if the court acted to vacate EPA's issuance of the biomass-based diesel requirements after the statutory deadline, the court considered that the statutory purpose of ensuring the U.S. consumption of the enumerated quantities of biomass-based diesel would have been thwarted.

It seems highly unlikely that in 2007 Congress intended in enacting the EISA that EPA's failure timely to issue the revised regulations or the 2010 standard would lead to the drastic and 'somewhat incongruous result,' that petitioners urge, namely precluding EPA from ensuring that both the 2009 and 2010 applicable volumes of biomass-based diesel are eventually sold or introduced into commerce.¹²³

That same situation is not present today, as the Agency's proposal to maintain the 1.28 billion gallon mandate in 2014 and 2015 continues to exceed the statutorily prescribed minimum of 1.0 billion gallons.

Third, in *NPRA v. EPA* the D.C. Circuit indicated that the deadlines provided in the EISA were "likely unrealistic." *Id.* But even if that was the case in 2010, that cannot possibly be the case now. Six years after the enactment of EISA, EPA cannot argue that it did not have adequate time to determine biomass-based diesel standards for 2014, nor can it claim that six years provides inadequate time to determine applicable volume for 2015.

Finally, the court found that Congress had anticipated the possibility of some retroactive impacts in the first year of the expanded fuel program. This is not the case in 2014 and the calls to

¹²³ *NPRA v. EPA* at 156.

increase the biomass-based diesel mandate beyond the amount previously promulgated without applying the statutory criteria and providing the 14-month lead time would completely eviscerate section 211(o)(2)(B)(ii). EPA does not have the authority to rewrite the statutory language in this manner.

The provision of the statute authorizing EPA to set biomass-based diesel requirements after 2012 is clear on its face. EPA may increase the biomass-based diesel standards by correctly applying the six enumerated criteria and by providing 14 months lead time. As such, EPA is without authority to increase the biomass-based diesel mandate beyond 1.28 billion gallons in the context of this rulemaking.

D. Imported Sugarcane Ethanol

As stated above in section IV. A. 4, our recommendation is that total ethanol be set at 9.7% of EIA's forecast for gasoline demand in 2014. This includes ethanol from all sources: corn, cellulosic, sugarcane, etc.

The volume of sugarcane ethanol will be limited by the ethanol blendwall. To the extent that the nested advanced biofuel mandate is set at a level that incentivizes the import of Brazilian sugarcane ethanol that advanced imported ethanol will merely displace domestically-produced ethanol, but does not help address the ethanol blendwall crisis.

The advanced biofuel requirement has been an opportunity to import hundreds of millions of gallons of sugarcane ethanol from Brazil. However, in the context of this rulemaking, only "domestic supply" of advanced biofuel should be considered when setting the advanced biofuel and total renewable volumes.

The RFS has encouraged these imports, which is contrary to the goals of EISA to promote energy independence and security. Drawing from the clear language of the CAA section 211(o) waiver provision, only "domestic supply" should be considered when setting the advanced biofuel and total renewable volumes.

In order not to exacerbate the ethanol blendwall and to promote domestically-produced renewable fuels, we recommend that the advanced biofuel requirement for 2014 be set at 1.92 billion, 1.28 billion gallons for biomass-based diesel times its 1.5 equivalence value. This would not prohibit sugarcane ethanol because it can still be used for compliance with the total renewable fuel standard.

E. Proposed New Methodology for Establishing Volume Standards Using Monte Carlo Simulation

EPA is seeking comments on its proposed new framework that uses Monte Carlo simulations to set the renewable volume standards for 2014 and beyond. API engaged separately two

independent consultants, who are experts in the field of decision analysis to evaluate the EPA proposed framework: Professor Robert Clemen (Duke University, Fuqua School of Business) and Decision Strategies, Inc. Their reports are submitted as appendices C and D.

Professor Clemen and Decision Strategies independently were able to replicate EPA's Monte Carlo Simulation (MCS) results using EPA's assumptions and probability distributions as inputs to the model. They concluded, however, that, while EPA performed the modeling process correctly from a technical point of view, there are significant concerns with the EPA assumptions used in the model that render the results problematic.

Below are excerpts from the Executive Summary of Professor Clemen's report:

- "... There are two major problems.
 - a. First, is that the probability that a particular facility would produce no fuel was not directly specified. The approach of assigning a lower bound (5th percentile) of zero implies that the probability of producing no fuel is the same (5%) across all facilities with the zero lower bound. This is an important modeling mistake. Especially for new facilities that were not yet producing, the probability of producing no fuel in 2014 should have been separately assessed.
 - b. Second, the probability distributions assigned appear to ignore recent experience with cellulosic producers. In particular, the smooth six-month ramp-up period from start-up to a stable volume appears to be inconsistent with information from the two facilities that began producing in 2013, both of which appear to have experienced wide variation in production levels from month to month. Moreover, neither appears to have exceeded 10% of its capacity utilization in its first year.
- The MCS output distribution for total cellulosic fuel produced can be sensitive to the input probability distributions assigned. The proposed rule indicates 5th and 95th percentiles of 8 and 30 million gallons, respectively. However, applying more realistic probability distributions for Abengoa, DuPont, and Poet – probability of producing no fuel set to 20% for Abengoa and 40% for both DuPont and Poet; and if fuel is produced, a distribution with the 95th percentile set at 20% of the plant's nameplate capacity, prorated over months the plant is expected to be open – results in 5th and 95th percentiles of 4.6 and 15.4 million gallons, respectively.

In order to improve the input probability distributions for new cellulosic facilities, EPA would benefit greatly by engaging the services of professional business analysts and experts that specialize in new-technology start-ups, especially in the renewable fuel industry. In addition, for these experts the EPA may benefit by using a more formal probability elicitation procedure.

- A specific issue in the total renewable fuel model is that the amount of ethanol used in E10 is taken to be a fixed value, based on EIA's forecast. Incorporating uncertainty into this forecast could have an impact on the output distribution.
- The analysis appears to have been done in a straightforward, "no frills" manner. The proposed rule says nothing about whether or what kind of sensitivity analysis might have been performed. Sensitivity analysis is typically a key part of any analysis and can reveal important insights about the model. In this case, sensitivity analysis identifies Abengoa as the key driver in the cellulosic biofuel model, and biomass-based diesel as the key driver in both total renewable fuels and advanced biofuel. The extent of the potential impact of small changes in the distributions for these variables is demonstrated.
- Given an output distribution from the MCS process, EPA requested comment on what value to choose as the standard (mean, median, mode, or another percentile.) The choice of a particular value to use as a standard should be recognized as a decision, and a "neutral methodology" would require proper cost-benefit analysis for all affected parties. Whether to use the mean, median, mode, or some other value boils down to this: EPA should do the economic analysis that would lead to a specific optimum value that can, in turn, be justified by the analysis. The agency appears to have the ability, and should be provided with adequate budgetary support, to perform such analysis as part of the proposed rule. The selected value would then be more than an arbitrary point chosen from the distribution but would be defensible on economic grounds."

Below are excerpts from the Executive Summary of the Decision Strategies report:

- "From the information provided by the EPA and in the Federal Register, Decision Strategies was able to reproduce the results of the proposed RFS. The Monte Carlo simulation and basic algorithms used in the EPA model appear to have been correctly applied."
- "Decision Strategies believes that probabilistic modeling using Monte Carlo simulation is an industry best practice and could be an appropriate method for modeling uncertainties and evaluating the Renewable Fuel Standard (RFS) volume estimates. However, the utility of the model is highly dependent on the assumptions used and the assessment of the ranged data."
- "The EPA did not use best practice Subject Matter Expert interviewing techniques with the individual companies or with the other sources of data. Specifically with cellulosic biofuel producers, they discussed possible ranges of production and likely start-up dates, but they did not make probabilistic assessments with the experts or try to deal with their biases. Much of the data manipulation was done post-interview based on the expertise and experience within the EPA. The EPA could improve their assessments through the use of de-biasing techniques with the Subject Matter Experts."

- “While the use of a 90 percent confidence range (P5 – P95) is fine, the EPA did not use best practice when creating ranges. They combined all of the variables associated with a volume into a single range plus distribution. A more appropriate modeling technique would have been to disaggregate uncertainties into two distinct groups for each company or category: one uncertainty would cover the risks related to plant completion and the second would determine the amount of production given a successful plant completion. This would improve the process without adding too much additional burden.”
- “The EPA’s method used a P5 of zero combined with the Half-Normal distribution to account for a plant that did not have commercial production in 2013. This applies the same probability of zero 2014 production to all plants. The probability of not achieving production is understated in the 5% to 8% range.”
- “The assumption to combine a six-month ramp-up (best case) with a plant capacity to develop the P95 is overly optimistic. The plant capacity is typically the volume a plant could produce if operated at nameplate capacity indefinitely. The availability factor influenced by maintenance, unplanned shut downs, etc. reduces this value. Therefore, the EPA set the P95 values at best case for the ramp-up and absolute best case for ultimate volume. Even if both the ramp up and the plant capacity were considered to be P95 values individually, to have both occur simultaneously would create a P99.75 value.”
- “Using the EPA data of the cellulosic biofuel volume shows that Abengoa has the largest impact (47.5%) on the variance of the total proposed volume and the combination of the two largest impacts (Abengoa and KiOR) is 71%. This would indicate that if there are any significant delays during completion of construction (for Abengoa) or ramp up problems with either of these producers the 2014 produced volume of cellulosic biofuels could be significantly impacted. The issues mentioned earlier in this section, combined with the dominating influence of these two plants, likely produces estimates for Cellulosic Biofuels that are overly optimistic.”
- “A sensitivity analysis should be performed to test assumptions and ranges. Decision Strategies has conducted a sensitivity analysis on the cellulosic biofuel assumptions.” Details are outlined in the report.

Summary and Recommendation

We recognize EPA’s efforts to establish a more quantitative method for establishing the annual volume standards and acknowledge that Monte Carlo simulation may be an appropriate method for characterizing uncertainty in the analysis. Based on the assessments from experts in the field of decision analysis, EPA should address several shortcomings in the current analysis before finalizing an appropriate technique to set the volume standards in the future.

Specific recommendations on the proposed EPA methodology:

- *Engage the services of subject matter experts that specialize in new-technology start-ups, especially in the renewable fuel industry. This will de-bias results and likely avoid the*

overly optimistic probability assumptions used by EPA that ignore historical performance of cellulosic plants.

- *Perform sensitivity analysis based on more realistic probability distributions. Monte Carlo simulation results change dramatically depending on the assumptions – for example, the 2014 RFS cellulosic standard can decrease by as much as 45% to 9.4 vs. 17 million gallons in the EPA proposal if different plant probabilities are used.*
- *Develop a “neutral methodology” based on proper cost-benefit analysis for all affected parties to justify a proposed specific optimum standard instead of arbitrarily selecting the mean, median, or mode of a probability distribution.*
- *Disaggregate uncertainties into distinct groups: one uncertainty would cover the risks related to plant completion and the second would determine the amount of production given a successful plant completion.*
- *Avoid use of the Half-Normal distribution.*
- *Consider use of the Influence Diagram to capture the interconnected nature of the uncertainties and the use of the Tornado Diagram to capture valuable insight into the impact of the uncertainties on the final values.*

Despite the shortcomings in the current analysis, EPA’s proposed ranges for the volume standards generally agree with the volumes proposed in our waiver petition, with the exception of cellulosic biofuel. Our recommendation for the 2014 volume standards for each of the four categories is detailed at the beginning of this document and in more detail in a following subsection.

F. Treatment of Carryover RINs in 2014

In our industry comments on the 2013 RFS Volume Standard NPRM, we objected to EPA’s use of carryover RINs to justify higher volume standards. We agree with the current EPA proposal that carryover RINs should not be considered in setting the annual RFS standards.¹²⁴ As stated by EPA in this Proposed Rule, carryover RINs are meant to provide flexibility for compliance in cases of unforeseen circumstances (e.g., drought). Furthermore, carryover RINs may not be uniformly accessible to all obligated parties. API and AFPM agree with the EPA’s proposed approach, and we encourage EPA to maintain this approach in the final rulemaking.

Obligated parties individually manage their compliance requirements and their acquisition of renewable fuels and RINs, including decisions on whether to secure additional RINs and bank them. EPA states that when it established the program structure in the 2007 rulemaking, carryover RINs were intended to provide flexibility to help in handling various unforeseen circumstances. It is imperative that obligated parties be provided with this flexibility to bank and carryover RINs without worrying that EPA will in essence remove any safety net or cushion the obligated parties have secured by increasing the volume obligations based on the potential size of the cumulative bank.

¹²⁴ Proposed Rule at 71767

Increasing the volume standards based on projected banked RINs would likely result in increased tightness in the RIN market. EPA's projected surplus (1.2 billion RINs)¹²⁵ is less than 10% of the proposed total renewable fuel requirement for 2014 (15.21 billion gallons). This level of surplus allows obligated parties flexibility in compliance yet is not so large that it threatens significant reduction of renewable fuel purchases due to use of banked RINs for 2014 compliance. By excluding carryover RINs, EPA is allowing the program to function as it was designed where obligated parties have some limited flexibility in managing their compliance using banked RINs.

EPA also suggested in this Proposed Rule that carryover RINs may be considered in the standard-setting process for years after 2014. This arbitrary methodology for inclusion or exclusion of carryover RINs in standard-setting contributes to compliance uncertainty.

Recommendation: We agree that EPA has taken the correct approach in not including carryover RINs in assessing the 2014 volume standards, and further recommend that EPA excludes carryover RINs for standard setting in all future years.

G. Options for Advanced Biofuel

EPA proposes three options for determining the appropriate advanced biofuel volume and range:¹²⁶

- Option 1 – Advanced Biofuel Availability
- Option 2 – Full Reduction in Cellulosic Biofuel
- Option 3 – Availability, Growth, and Limits on Ethanol Consumption

Option 2, the full reduction in cellulosic biofuel, is the most straightforward option and removes any subjectivity in predicting the volumes of advanced biofuel which may be available to meet the standard. Therefore, it is the most equitable way to apply the waiver authority. For 2014, Option 2 would result in a very narrow range of 2.00 to 2.03 billion gallons per year of advanced biofuels. This is at the low end of the EPA's proposed range of 2.00 to 2.51 billion gallons for 2014 (derived from Option 3).

Recommendation: We recommend Option 2 as the most logical and straightforward way for EPA to exercise its discretion under the cellulosic biofuel waiver authority; this Option is also consistent with the mechanism proposed by API and AFPM in the Waiver Petition. Option 3 is a workable option that considers the limitation of the blendwall by excluding ethanol advanced biofuel, and may be a reasonable method to employ in future years. Option 1 does not sufficiently address the blendwall issue and should be rejected.

¹²⁵ *Id.*

¹²⁶ Proposed Rule at 71774-75.

H. Summary for 2014

As noted in the Introduction, and explained in these comments and in our Petition for Partial RFS Mandate Waiver dated August 13, 2013, AFPM and API proposed that EPA use its statutory waiver authority to finalize the 2014 volume standards as follows:

Renewable Fuel Volumes for 2014
(billion gallons)

Cellulosic biofuels	0.0 ¹²⁷
Biomass-based diesel	1.28
Advanced biofuel	1.92
Total renewable fuel	14.8

V. Percentage Standards for 2014

A. EPA has erred in calculating proposed compliance percentage standards.

The renewable fuel standards are expressed as percentages and are used by each refiner and importer to determine their RVOs. EPA proposed percentage standards for 2014 using the following terms¹²⁸ (billion gallons):

RFV _{CB, 2014}	0.017	
RFV _{BBD, 2014}	1.28	
RFV _{AB, 2014}	2.20	
RFV _{RF, 2014}	15.21	
G ₂₀₁₄	132.65	(48 contiguous states + Hawaii)
D ₂₀₁₄	47.12	(48 contiguous states + Hawaii) ¹²⁹
RG ₂₀₁₄	13.12	
RD ₂₀₁₄	1.38	

EPA is required to use October 2013 EIA projections for gasoline and diesel demand in 2014.¹³⁰ In previous years, EIA has provided letters to EPA¹³¹ as required by statute but failed to perform

¹²⁷ We recommend a cellulosic biofuel mandate of less than two million gallons; significantly less than EPA’s proposal of 17 million gallons.

¹²⁸ Proposed Rule at 71781-82. Table V.B.3-1.

¹²⁹ In addition, diesel fuel used in ocean-going vessels is excluded.

¹³⁰ CAA section 211(o)(3)(A): “Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.”

this duty in October 2013 for projections for 2014. AFPM sent a letter to EIA, dated November 22, 2013, reminding EIA that this is a nondiscretionary requirement.¹³²

In the NPRM for the 2014 RFS standards, EPA selected 47.12 billion gallons for diesel (D₂₀₁₄). This volume is much lower than any of the previous years. Table 6 and the accompanying Figure 7 show the historical data for diesel demand that EPA used in prior annual RFS rulemakings. Using the diesel demand stated in the 2013 RFS standard final rule, the RFS percentage standards for 2014 calculated in the last column of Table 6 are lower than the numbers provided in the NPRM.

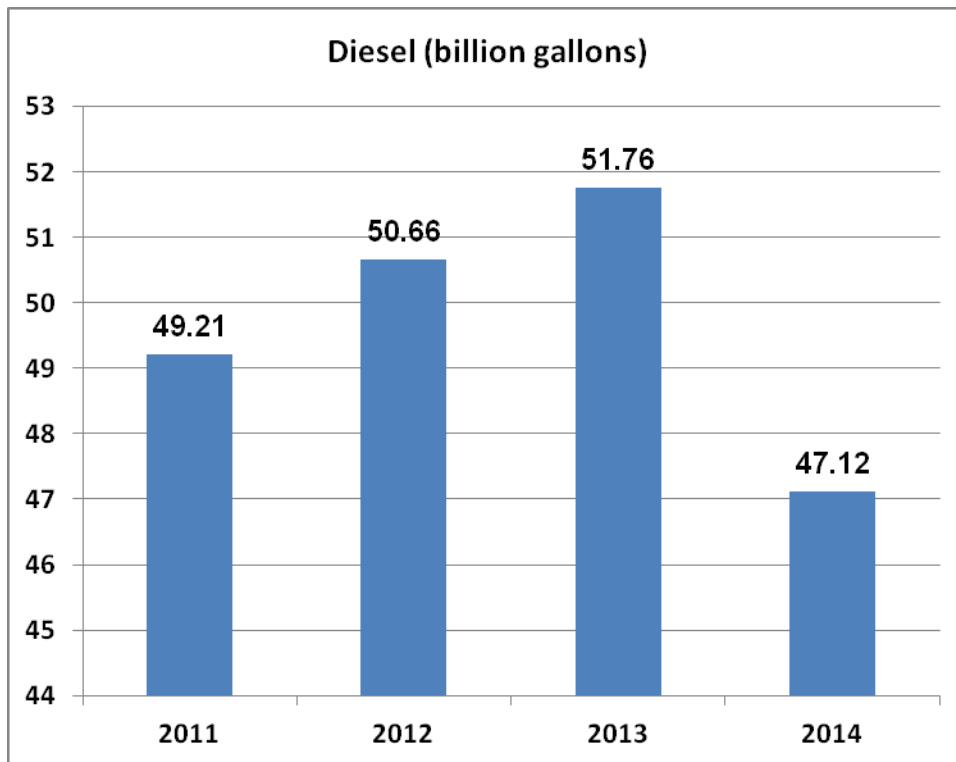
Table 6.

RFS Annual Standards	2011	2012	2013	2014 proposal	2014 calculated with 2013 diesel demand
Cellulosic biofuels	0.003%	0.006%	0.004%	0.010%	0.010%
Biomass-based diesel	0.69%	0.91%	1.13%	1.16%	1.13%
Advanced biofuel	0.77%	1.21%	1.62%	1.33%	1.29%
Total renewable fuel	8.01%	9.23%	9.74%	9.20%	8.95%
Gasoline Demand (bgpy)	139.07	135.39	132.80	132.65	132.65
Diesel Demand (bgpy)	49.21	50.66	51.76	47.12	51.76

¹³¹ In October 2010, 2011, and 2012

¹³² See Appendix B

Figure 7.



We believe that the projections for gasoline, diesel and renewable fuels for 2014 must be consistent with EIA's October 2013 STEO and recommend that EIA publish and EPA use these volumes in setting the 2014 percentage standards.

A timely EIA letter to the EPA in October 2013 would have avoided this confusion. We are disappointed that EIA chose to ignore this statutory obligation.

Because the 2014 RFS Volume Standards will not be finalized until well into the year, obligated parties are required to guess the number of RINs they will need to ensure their compliance with the RFS in 2014. In prior years, the NPRM provided information useful in calculating RFS obligations; however, this year the NPRM does not present a sufficient basis for calculating the compliance percentages. EPA is not using the appropriate EIA forecast as the basis for the calculation, and it appears that the diesel volume is not correct.

B. EPA should not adjust standards for 2014 because of exemptions for small refineries and small refiners approved after November 30, 2013

In the NPRM, EPA states:

However, at this time, no exemptions have been approved for 2014. Therefore, for this proposal we have calculated the 2014 standards without a small refinery/small refiner adjustment. However, if an individual small refinery or small refiner requests an exemption and is approved prior to issuance of the final rule, the final standards will be adjusted to account for the exempted volumes of gasoline and diesel.¹³³

The Proposed Rule's mention that there could be a last-minute adjustment to 2014 RFS standards based on an unknown quantity of small refinery/small refiner exemptions does not adequately frame the subject for discussion in public comments or provide sufficient information on which to comment. Stakeholders should not be required to guess at how many small refinery/small refiner exemption petitions will be approved by EPA for 2014 after the beginning of the 2014 compliance period, or file comments on the basis for such presently unknown exemptions.

Since no small refinery/small refiner exemptions for 2014 were approved by November 30, 2013, EPA should not make any adjustments to the compliance percentages for small refiner/refinery exemptions in the final rule. It is simply too late and inappropriate (months after the deadline to set final RFS standards) to make retroactive adjustments to the standards by reducing gasoline and diesel volumes. We are not suggesting that EPA cannot grant small refinery/small refiner exemptions, but we believe that obligated parties should not be penalized with last-minute adjustments that increase the regulatory obligations after the beginning of the 2014 compliance period.

Stakeholders should have the opportunity to comment on potential small refinery/small refiner exemptions because they can have a direct effect on the calculation of the regulatory percentage standards. This opportunity for public comment was not provided for 2013. EPA's proposal for the 2013 RFS did not identify any applications for exemptions (even though the proposal was published in the Federal Register on February 7, 2013 – after the beginning of the compliance period). Yet one was granted and reflected in the final rule for 2013. This inappropriate procedure should not be repeated for 2014.

The final standards for 2014 should not be adjusted to account for exempted volumes of gasoline and diesel. The final standards for 2014 should be calculated based on zero volumes of exempted gasoline and diesel because small refinery/small refiner exemptions were not granted for 2014 by November 30, 2013.

¹³³ Proposed Rule at 71781

VI. EPA Should Follow the Clean Air Act and Utilize the Prescribed Process and Data in Setting the Standards in a Timely Way

A. The October 31, 2013 EIA Forecast Should be Produced and Entered into the Docket.

Contrary to the clear language in the CAA, EIA did not provide EPA with the transportation fuel estimates required by the statute.¹³⁴ Instead, EPA used EIA's October 2013 Short-Term Energy Outlook ("STEO") to estimate projected gasoline volume and EIA's Annual Energy Outlook 2013 Early Release to estimate projected diesel volume for 2014.¹³⁵ The published monthly STEO forecast that EPA relies on does not include all the data needed for the RFS projections. In particular, it contains neither cellulosic production estimates nor the specific diesel consumption data required by the RFS.¹³⁶

For the final rule, EPA is required by statute to use transportation fuel projections for 2014 that EIA provides to EPA by October 31, 2013. CAA Section 211(o)(3) states:

(A) Provision of estimate of volumes of gasoline sales
Not later than October 31 of each of calendar years 2005 through 2021, the Administrator of the Energy Information Administration shall provide to the Administrator of the Environmental Protection Agency an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States.

(B) Determination of applicable percentages
(i) In general
Not later than November 30 of each of calendar years 2005 through 2021, *based on the estimate provided under subparagraph (A)*, the Administrator of the Environmental Protection Agency shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met.¹³⁷

¹³⁴ See U.S. Energy Information Administration, "EPA proposes 2014 Renewable Fuel Standard, with EIA to provide input to the final rule," *This Week in Petroleum*, (November 20, 2013), <http://www.eia.gov/oog/info/twip/twip>. AFPM sent EIA a letter advising that it failed to comply with the CAA statutory deadline. A copy of AFPM's November 22, 2013 letter to Adam Sieminski is attached as Appendix B.

¹³⁵ Proposed Rule at 71781.

¹³⁶ Note EPA used incorrect diesel consumption data in calculating the proposed RFS percentages. The consequence of this mistake is discussed in Section V.A, *infra*.

¹³⁷ CAA section 211(o)(3) (emphasis added).

The statutory provisions quoted above ensure that EPA issues a final rule by November 30 of each year and bases the rule on an EIA estimate provided by October 31. As the italicized language makes clear, EPA must base the final RFS on the EIA estimate provided pursuant to section 211(o)(3)(A), which is the EIA estimate provided by October 31, 2013. The CAA does not grant EIA discretion to provide EPA with this information only 30 days before the rule is finalized; instead, EIA is statutorily obligated to provide the data in advance of the October 31 deadline each year – regardless of when EPA finalized the rule. Regulatory certainty is crucial for obligated parties to appropriately plan and anticipate their obligations in advance of the compliance year. However, EPA repeatedly has deprived obligated parties of this certainty by its late publication of the RFS standards in violation of the November 30 statutory deadline.

Given that the 2014 compliance year has already begun without EIA publishing the requisite transportation fuel consumption and renewable fuel production data, EIA should immediately cure this legal infirmity by calculating and publishing its October 2013 transportation and renewable fuels projections. These corrective actions will allow obligated parties to adjust their RIN positions to more closely match their current gasoline and diesel production. EPA also should take steps to provide some regulatory certainty by utilizing the EIA data specified in the statute as the basis for the final rule. In future years, EPA and EIA must ensure that the RFS statutory deadlines are met.

EIA's failure to produce the data required by the statute and EPA's tardiness in promulgating a final RFS rule before the 2014 compliance period began create uncertainty and raise questions as to the data EPA will use in promulgating this final rule. The Proposed Rule states that "[t]he projected volumes of gasoline and diesel that will be used to calculate the final 2014 percentage standards will be provided to EPA by EIA."¹³⁸ This assertion is contrary to the explicit terms of the CAA, which requires EIA to generate transportation fuel estimates based upon the information in existence on or before October 31, 2013 and EPA to base the final rule upon that data.¹³⁹ EPA's proposal to base the final rule upon data that is generated after the beginning of the compliance year, exacerbates the problems caused by EPA's tardiness. This amounts to unlawful retroactive rulemaking that alters refiners' obligations after they have begun to accrue.

Recommendation: EIA should produce the estimates of transportation fuel, biomass-based diesel, and cellulosic biofuel based on data available on October 31, 2013, as required by statute. The EIA estimates should be entered into the docket to be used by obligated parties as a guide with which to plan their compliance with the 2014 RFS requirements.

¹³⁸ Proposed Rule at 71781.

¹³⁹ In 2013, EPA departed from the clear statutory requirement and historical precedent by requesting and utilizing EIA transportation fuel consumption data generated after the compliance year had begun. This unlawful, retroactive aspect of the 2013 RFS final rule is the subject of litigation pending before the D.C. Circuit. See *Monroe Energy v. EPA* (Case No. 13-1265).

B. The EPA Should Meet the Procedural CAA Requirements for Notice and Comment.

The Agency also must comply with the procedural requirements of the CAA, including the requirement that it provide a meaningful opportunity for interested parties to comment on information upon which EPA relies. The CAA requires EPA to provide advance notice and an opportunity to comment on “[a]ll data, information, and documents . . . on which the proposed rule relies.”¹⁴⁰ The statute also prohibits EPA from basing a final rule “(in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.”¹⁴¹

While EPA has not complied with the CAA’s procedural requirements for proposed rules, the Agency should promptly place all relevant information in the rulemaking docket, including the estimate of 2014 transportation fuel volume projected on which it will base RFS percentage standards. With respect to any final rule, if EPA relies, as it apparently intends to do, on different data for the final rule than it relied upon in the proposed rule, it will also not comply with the CAA’s explicit requirements. If EPA relies on an EIA estimate that is submitted after October 31, 2013, after the commencement of the 2014 compliance year, or after the close of the public comment period, it will violate the CAA.¹⁴²

EPA has not proposed, nor has it provided any basis in the Proposed Rule, to change the estimates on which the final rule will be based. EPA provides no rationale why the Agency intends to use estimates apart from those specified in the statute under CAA section 211(o)(3). Even though EPA based the 2013 RFS Final Rule on a May 2013 EIA estimate, EPA did not reinterpret CAA section 211(o)(3) requirements as meaning anything other than estimates provided to EPA by October 31 of the year prior to a RFS compliance year.¹⁴³

Current regulations governing the calculation of RFS standards do not reference (or even contemplate) using EIA estimates other than those provided in accordance with the statute. Specifically, 40 C.F.R. 80.1405(b) provides that “EPA will calculate the value of the annual standards and publish these values in the Federal Register by November 30 of the year preceding the compliance year.” 40 C.F.R. 80.1405(c) then provides equations for the calculation required by 40 C.F.R. 80.1405(b) to include the amount of gasoline and diesel projected to be used in the contiguous United States and Hawaii. Percentage standards calculated under 40 C.F.R. 80.1407 are then based on the calculations performed under 40 C.F.R. 80.1405.

¹⁴⁰ CAA section 307(d)(3).

¹⁴¹ *Id.* at § 307(d)(6)(C).

¹⁴² AFPM and API have challenged in the D.C. Circuit EPA’s decision to base the final RFS for 2013 on May 2013 EIA projections of gasoline and diesel consumption. This procedure is not acceptable because it deviates from the statute and leaves obligated parties guessing after the beginning of the compliance period.

¹⁴³ *See* 78 Fed. Reg. at 9286.

In the Proposed Rule, EPA apparently reinterprets its regulatory mandate and overlooks the rules requiring adherence to the statutory schedule and EIA's central role in providing timely estimates for proposed percentage standards. As cited in *Env'tl. Integrity Project v. EPA, Paralyzed Veterans of Am. V. D.C. Arena, L.P.*¹⁴⁴ “[o]nce an agency gives its regulation an interpretation, it can only change that interpretation as it would formally modify the regulation itself, through the process of notice and comment rulemaking.”¹⁴⁵ But EPA has not done so here. It has provided no rationale in the Proposed Rule by which it will use unidentified EIA estimates that “will be provided” to calculate standards at some point during 2014.¹⁴⁶ EPA has not specified whether the EIA estimate it references is the one EIA was required to provide by October 31, 2013, or whether it envisions some different EIA estimate. It also has provided no rationale or explanation of why such estimates would conform to the statutory structure of the RFS program. EPA does not take comment on changing the timeframe for calculating RFS requirements based on the latest available STEO, or alternatives to this estimate.

In short, EPA may implicitly be seeking to alter the RFS standard setting process through its conduct in this rulemaking, but regulatory changes require a public process of notice and the opportunity for comment and must be based not only on factual data, but “major legal interpretations and policy considerations underlying the proposed rule.”¹⁴⁷ All of this is absent in the current notice.

Recommendation: EPA should meet the procedural requirements of the CAA by using the EIA's October 31, 2013 transportation fuel estimates as the basis for finalizing the rule. If EPA intends to alter the process by which it establishes the RFS standards each year, it should undertake a separate effort to modify the regulations, including an opportunity for public review and comment on the proposed changes.

VII. RFS in 2015 and Beyond

EPA requests comments on how the RFS program should be administered in 2015 and beyond. First, EPA must return to regular order and commit to issuing the annual RFS standards in accordance with the November 30 statutory deadline. The law requires EPA to issue the annual standards by November of the preceding year. EPA has yet to meet that deadline. That has to stop. Issuing the final standards when half the year is already over creates tremendous

¹⁴⁴ 117 F. 3d 579 (D.C.Cir. 1997)

¹⁴⁵ *Id.* at 586.

¹⁴⁶ Compare this approach with the proposed RFS standards for 2012. “Today’s notice provides our proposed evaluation of the projected production of cellulosic biofuel for 2012, our proposed evaluation of whether to lower the applicable volumes of advanced biofuel and total renewable fuel, and the proposed percentage standards for compliance year 2012. We will complete our evaluation based on the comments received in response to this proposal, the estimate of projected biofuel volumes that the EIA is required to provide to EPA by October 31, and other information that becomes available, and will make final determinations of applicable volumes and percentage standards for 2012 by November 30, 2011. 76 Fed. Reg. 38844, 38846 (July 1, 2011).

¹⁴⁷ CAA section 307(d)(3)(C).

uncertainty for all stakeholders and will likely have adverse impacts on consumers and obligated parties. The current situation places obligated parties in an untenable position of being required to presume what the next years' standards will be. The RFS structure was explicitly designed to provide certainty regarding upcoming regulatory requirements. It was not designed to ask obligated parties annually to either presume that required standards will be based on the volumes outlined in the law, or some other level determined midway (or later) during the course of a compliance year. Whenever final standards are established, delay likely impacts decisions regarding carryover RINs, potentially affects RIN prices and ultimately impacts the supply of gasoline and diesel fuel. Timely issuance of the standards is becoming even more important as the volumes outlined in the law escalate.

As part of that annual standard setting exercise, it is imperative that EPA follow the law and obtain from EIA the gasoline and demand estimates for the upcoming year. In order to meet the statutory November deadline for issuing the final standards, EPA should obtain these projections from EIA as early as practical each year. We recommend that EPA obtain the information from EIA not later than August to facilitate including the estimates in the Notice of Proposed Rulemaking.¹⁴⁸

As the volumes outlined in the law continue to escalate, it is also clear that EPA will have to continue to rely on its general waiver authority to adjust the standards down to feasible levels to avoid the adverse consequences outlined in the NERA Study. Furthermore, as soon as EPA adjusts any given standard by more than 20 percent in any two consecutive years or by 50 percent in any single year, EPA is required by law to readjust the entire schedule for the standards although the readjusted schedule cannot be effective until 2016.^{149 150} EPA has already triggered that rulemaking requirement for the cellulosic category and it is clear that EPA will soon trigger that readjustment provision for the advanced and general renewable categories to avoid the adverse consequences of the blendwall as discussed in the NERA Study. We recommend that EPA take a comprehensive approach toward adjusting the cellulosic, advanced and general renewable standards adjusting them all at the same time in a coordinated fashion.

¹⁴⁸ In fact, in the RFS 2 rulemaking, EPA stated that “for future standards, we intend to issue an NPRM by summer and a final rule by November 30 of each year in order to determine the appropriate standards applicable in the following year.” 75 Fed. Reg. 14670, 14675 (March 26, 2010).

¹⁴⁹ “(F) MODIFICATION OF APPLICABLE VOLUMES.—For any of the tables in paragraph (2)(B), if the Administrator waives—

“(i) at least 20 percent of the applicable volume requirement set forth in any such table for 2 consecutive years; or

“(ii) at least 50 percent of such volume requirement for a single year, the Administrator shall promulgate a rule (within 1 year after issuing such waiver) that modifies the applicable volumes set forth in the table concerned for all years following the final year to which the waiver applies, except that no such modification in applicable volumes shall be made for any year before 2016. In promulgating such a rule, the Administrator shall comply with the processes, criteria, and standards set forth in paragraph (2)(B)(ii).”.

¹⁵⁰ EPA discussed this adjustment in the Final Rule for the 2013 RFS standards at 78 Fed. Reg. 49811.

VIII. EPA's Proposed Rescission of the 2011 Cellulosic Biofuel Standard is Appropriate

AFPM and API support EPA's proposal to grant their petitions for reconsideration, rescind the 2011 cellulosic biofuel mandate, and refund the money paid by obligated parties to purchase cellulosic biofuel waiver credits.¹⁵¹ In promulgating the 2011 cellulosic biofuel standard, EPA produced an aspirational, rather than a realistic, cellulosic biofuel production estimate.

The U.S. Court of Appeals for the District of Columbia Circuit vacated the 2012 cellulosic biofuel standard on the grounds that EPA failed to apply a "neutral methodology" because "the risk of overestimation [was] set deliberately to outweigh the risk of underestimation."¹⁵² In promulgating the 2011 cellulosic biofuel standard, EPA has now acknowledged that it used essentially the same methodology that the D.C. Circuit held to be unlawful.¹⁵³ EPA's acknowledgment that it failed to apply a neutral methodology in establishing the 2011 cellulosic biofuel standard compels the Agency to rescind the standard.

¹⁵¹ Proposed Rule at 71737, 71751.

¹⁵² *API v. EPA*, 706 F.3d 474 (D.C. Cir. 2013).

¹⁵³ Proposed Rule at 71751/2 (EPA "used essentially the same methodology to develop the 2011 cellulosic biofuel standard as we did to develop the 2012 standard....").

AFPM/API Comments 2014 RFS
Docket ID No. EPA-HQ-OAR-2013-0747
Docket ID No. EPA-HQ-OAR-2013-0479

APPENDICES (in separate document)

Appendix A
Aug 2013 Waiver Petition w/ NERA and MathPro Reports

Appendix B
AFPM letter to EIA letter (November 2013)

Appendix C
“Analysis and critical review of Monte Carlo simulation and decision analysis in EPA’s 2014 RFS proposed rule”
Prepared for the American Petroleum Institute
by Professor Robert T. Clemen
January 16, 2014

Appendix D
ANALYSIS AND CRITICAL REVIEW OF THE MONTE CARLO SIMULATION AND DECISION ANALYSIS USED TO DEVELOP THE EPA’S 2014 RENEWABLE FUEL STANDARDS PROPOSED RULE
Decision Strategies, Inc.
January 27, 2014

Appendix E
Applicable provisions of EPCRA 2005 and EISA 2007