ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 80

[EPA–HQ–OAR–2015–0111; FRL–9927–28–OAR]

RIN 2060–AS22

Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: Under section 211 of the Clean Air Act, the Environmental Protection Agency (EPA) is required to set renewable fuel percentage standards every year. This action proposes annual percentage standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel that apply to all motor vehicle gasoline and diesel produced or imported in the years 2014, 2015, and 2016. The EPA is establishing a cellulosic biofuel volume for all three years that is below the applicable volume specified in the Act, and is also proposing to rescind the cellulosic biofuel standard for 2011. Relying on statutory waiver authorities, the EPA is proposing to adjust the applicable volumes of advanced biofuel and total renewable fuel for all three years. The 2015 and 2016 proposed standards are expected to spur further progress in overcoming current constraints in renewable fuel distribution infrastructure, which in turn is expected to lead to substantial growth over time in the production and use of higher-level ethanol blends and other qualifying renewable fuels. In this action, we are also proposing the applicable volume of biomass-based diesel for 2014, 2015, 2016, and 2017. Finally, we are proposing compliance and attest reporting deadlines for the years 2013, 2014, and 2015, as well as proposing regulatory amendments to clarify the scope of the existing algal biofuel pathway.

DATES: Comments must be received on or before July 27, 2015.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2015–0111, to the Federal eRulemaking Portal: *http://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. If you need to include CBI as part of your comment, please visit *http://www.epa.gov/dockets/comments.html* for instructions. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make.

For additional submission methods, the full EPA public comment policy, and general guidance on making effective comments, please visit *http://www.epa.gov/dockets/comments.html.*

FOR FURTHER INFORMATION CONTACT: Julia MacAllister, Office of Transportation and Air Quality, Assessment and Standards Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: 734–214–4131; email address: *macallister.julia@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this action apply to me?

Entities potentially affected by this proposed rule are those involved with the production, distribution, and sale of transportation fuels, including gasoline and diesel fuel or renewable fuels such as ethanol, biodiesel, renewable diesel, and biogas. Potentially regulated categories include:

Category	NAICS [1] Codes	SIC [2] Codes	Examples of potentially regulated entities
Industry	324110	2911	Petroleum Refineries.
Industry	325193	2869	Ethyl alcohol manufacturing.
Industry	325199	2869	Other basic organic chemical manufacturing.
Industry	424690	5169	Chemical and allied products merchant wholesalers.
Industry	424710	5171	Petroleum bulk stations and terminals.
Industry	424720	5172	Petroleum and petroleum products merchant wholesalers.
Industry	221210	4925	Manufactured gas production and distribution.
Industry	454319	5989	Other fuel dealers.

[1] North American Industry Classification System (NAICS)
[2] Standard Industrial Classification (SIC) system code.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your activities would be regulated by this action, you should carefully examine the applicability criteria in 40 CFR part 80. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

Outline of This Preamble

I. Executive Summary

The Renewable Fuel Standard (RFS) program began in 2006 pursuant to the requirements in Clean Air Act (CAA) section 211(o) that were added through the Energy Policy Act of 2005 (EPAct). The statutory requirements for the RFS program were subsequently modified through the Energy Independence and Security Act of 2007 (EISA), resulting in the publication of major revisions to the regulatory requirements on March 26, 2010.[1] [2] Since the initial promulgation of the RFS program regulations in 2007, domestic production and use of renewable fuel volumes in the U.S. has increased substantially. According to the Energy Information Administration (EIA), fuel ethanol production in the U.S. doubled in volume from approximately 6.5 billion gallons in 2007 to about 14.3 billion gallons in 2014.[3] Growth in biodiesel and renewable diesel production in the U.S. has increased more than two and a half times, from approximately 0.5 billion gallons in 2007 to 1.46 billion gallons in 2014.[4] Today, nearly all of the approximately 138 billion gallons of gasoline used for transportation purposes contains 10 percent ethanol (E10).

The fundamental objective of the RFS provisions under the Clean Air Act is clear: To increase the use of renewable fuels in the U.S. transportation system every year through at least 2022. These fuels include corn starch ethanol, the predominant biofuel in use to date, but Congress envisioned the majority of growth over time to come from advanced biofuels as the non-advanced (conventional) volumes remain constant starting in 2015 while the advanced volumes continue to grow. Advanced biofuels are required to have lower greenhouse gas (GHG) emissions on a lifecycle basis than conventional biofuels. Increased use of renewable fuels means less use of fossil fuels, which results in lower GHG emissions over time as advanced biofuel production and use becomes more commonplace. By aiming to diversify the country's fuel supply, Congress also intended to increase the nation's energy security. Renewable fuels represent an opportunity for the U.S. to move away from fossil fuels towards a set of lower GHG transportation fuels, and a chance for a still-developing low GHG technology sector to grow.

The law establishes annual volume targets,[5] and requires EPA to translate those volume targets (or alternative volume requirements established by EPA in accordance with statutory waiver authorities) into compliance obligations that refiners and importers must meet every year. Over the past few years, we have seen analysis concluding that the ambitious statutory targets in the Clean Air Act exceed real world conditions.[6] Despite significant efforts by the U.S. Departments of Agriculture (USDA) and Energy (DOE) to promote the use of renewable fuels, real-world limitations, such as the slower than expected development of the cellulosic biofuel industry, less growth in gasoline use than was expected when Congress enacted these provisions in 2007, and constraints in supplying certain biofuels to consumers, have made the timeline laid out by Congress extremely difficult to achieve. These challenges remain, even as we recognize the success of the program over the past decade in boosting renewable fuel use, and the recent significant signs of progress towards development of increasing volumes of advanced, low-emitting GHG fuels, including cellulosic biofuels and ''drop-in'' biofuels (those that are made from renewable sources but are otherwise essentially indistinguishable from the fossil-based fuels they displace).

And so the challenge EPA faces in developing this proposal is increasing renewable fuels over time to address climate change and increase energy security while also accounting for the

[1] 75 FR 14670, March 26, 2010.

[2] A full description of the statutory basis of the RFS program and EPA's actions to develop and implement the regulatory program are provided in a memorandum to the docket. See, ''Statutory basis of the RFS program and development of the regulatory program,'' memorandum from Madison Le to EPA docket EPA–HQ–OAR–2015–0111.

[3] EIA's Monthly Energy Review, April 21015, Table 10.3.

[4] 2007 volume represents biodiesel only, from EIA's Monthly Energy Review, April 2015, Table 10.4. 2014 volume represents biodiesel and renewable diesel production from EMTS.

[5] CAA 211(o)(2)(B).

[6] See, for example, ''Renewable Fuel Standard Potential Economic and Environmental Effects of U.S. Biofuel Policy (2011),'' National Research Council.

real-world limitations that have slowed progress towards such goals, and that have made the volume targets established by Congress for 2014, 2015, and 2016 effectively beyond reach. This proposal attempts to find an approach that achieves these objectives.

We believe that the RFS program can drive renewable fuel use, and that it is appropriate to consider the ability of the market to respond to the standards we set when we assess the amount of renewable fuel consumption that can be achieved. While we are proposing to use the tools Congress provided to make adjustments to the law's volume targets in recognition of the constraints that exist today, we are proposing standards for 2015 and 2016 that will drive growth in renewable fuels, particularly those fuels that are required to achieve the lowest lifecycle GHG emissions. We believe that over time use of both higher ethanol blends and non-ethanol biofuels can and will increase, consistent with Congress' intent in enacting EPAct and EISA. In our view, while Congress recognized that supply challenges may exist as evidenced by the various waiver provisions, it did not intend growth in the renewable fuels market to be ultimately prevented by those challenges, including such constraints as the ''E10 blendwall'' [7] or demand for gasoline or diesel. The fact that Congress chose to mandate increasing and substantial amounts of renewable fuel clearly signals that it intended the RFS program to create incentives to increase renewable fuel supplies and overcome limitations in the market. The standards we are proposing are forward-leaning and reflect those incentives.

The proposed volume requirements would push the fuels sector to produce and blend more renewable fuels in 2015 and 2016 in a manner that is consistent with the goals Congress envisioned. The proposed volumes are less than the statutory targets for 2015 and 2016 but higher than what the market would produce and use in the absence of such market-driving standards. The 2015 and 2016 standards are expected to spur further progress in overcoming current constraints and lead to continued growth in the production and use of higher ethanol blends and other qualifying renewable fuels. In this regard the proposed standards are intended to fulfill the spirit and intent of Congress and provide guidance to market participants. Once finalized, this rule would put renewable fuel production and use on a path of steady, ambitious growth.

This proposal comes during a period of transition for the RFS program. In the program's early years, compliance with the advanced biofuel and total renewable volume requirements could be readily achieved in large part by blending increasing amounts of ethanol into gasoline and biodiesel into diesel fuel. As the program progresses, however, significantly increasing renewable fuel volumes will require pushing beyond current constraints on blending more ethanol into gasoline and will require sustained growth in the development and use of advanced, non-ethanol renewable fuels, including drop-in renewable fuels. This proposed rule acknowledges this transition by proposing volume requirements based not only on the volumes of renewable fuels that have already been achieved in 2014 and the first part of 2015, but also on the additional volumes that can be supplied later in 2015 and in 2016 as the market addresses infrastructure and other constraints. Our proposal includes volumes of renewable fuel that will require either ethanol use at levels significantly beyond the level of the E10 blendwall, or significantly greater use of non-ethanol renewable fuels than has occurred to date, depending on how the market responds to the standards we set. The standards we are proposing for 2015 and 2016 in particular would drive growth in renewable fuels by providing appropriate incentives to overcome current constraints and challenges to further the goals of Congress in establishing the RFS program. The approach we propose taking for 2015 and 2016 is forward-looking and consistent with the purpose of the statute to significantly increase the amount of renewable fuel used as transportation fuel over time, particularly renewable fuels with the lowest lifecycle GHG emissions, in the transportation fuel supply.

Since the amount of renewable fuel that can be produced and imported is larger than the volume that can be consumed due to overall demand for transportation fuel and constraints on supply to vehicles and engines, there is necessarily competition among biofuels for retail consumption in the United States. In this proposed rule we have worked to achieve an appropriate and reasonable balance between setting volume requirements that would provide support for biofuels that are more established, while also providing opportunities under those volume requirements for emerging biofuels. The approach we have used to determine the proposed volumes is consistent with Congressional intent in establishing the RFS program in that it provides an opportunity for a diverse array of renewable fuel types to be used for compliance. Competition is good for obligated parties and consumers, as it permits the market to determine the most efficient, lowest cost, best performing fuels for meeting the increasingly higher volume requirements anticipated year to year under the program. However, it is also important to provide support to existing successful biofuels and to provide incentives for those fuels, especially advanced biofuels that produce the greatest reductions in greenhouse gases. As discussed in Section III, we are proposing that the specific volume requirement for biomass-based diesel (BBD) should be increased over 2013 levels through 2017 to provide additional support for that industry in a way that furthers the statutory goal of increasing the use of renewable fuel and reducing lifecycle GHGs. At the same time, the increase in the required BBD volume that we are proposing still leaves a substantial volume under the advanced biofuel standard open for competition among all qualifying advanced biofuels.

We recognize that our delay in issuing standards for 2014 and 2015 has created additional uncertainty in the marketplace. We are committed to returning our standard-setting process to the statutory schedule, to provide the certainty that will allow the biofuels sector and the RFS program to succeed. The first step in providing this certainty is finalizing the volume requirements for 2014, 2015, and 2016 by November 30, 2015. For 2014, the compliance year is now over, and any standard EPA sets for 2014 can no longer influence renewable fuel production or use in that year. This is a significant change in circumstances from those at the time of the November 2013 proposal for volume requirements that would have applied in 2014. Therefore, we are issuing this new proposal for 2014 that reflects late issuance of the rule and those volumes of renewable fuel that were actually used in 2014. Details regarding how we calculated such ''actual'' volumes used in 2014 for purposes of this proposal are discussed in Section II.C.1 below. For 2015, our proposed approach combines a consideration of those volumes of renewable fuel that were actually used in the past with a forward-leaning approach for the future that is intended to promote renewable fuel use. For 2016, our approach to determining the volumes to propose is, as discussed, forward-leaning and consistent with the

[7] The ''E10 blendwall'' represents the volume of ethanol that can be consumed domestically if all gasoline contains 10% ethanol and there are no higher-level ethanol blends consumed such as E15 or E85.

statute's intent to promote growth in renewable fuel use over time.

This proposal represents EPA's commitment to continued support for steady growth in renewable fuel use. However, we recognize that the RFS standards are only one element among many that factor into the success of renewable fuel development and use over time. The standards that EPA sets each year are an important part of the overall picture, but this program is complemented and supported by programs managed by the U.S. Departments of Agriculture (USDA) and Energy (DOE), as well as myriad efforts and initiatives at the regional and local level and within the private sector. DOE has invested considerable resources to help deploy the advanced technologies needed to achieve the statutory aims of lower carbon fuels, and DOE has leveraged several billion dollars more in private support for development of advanced renewable fuels. USDA's Biorefinery Assistance Program has provided loan guarantees for the development and construction of commercial scale biorefineries with a number of the new projects focused on producing fuels other than ethanol. Greater GHG benefits are expected to be realized as the production and use of advanced biofuels accelerates, and the volume requirements that we are proposing support this goal.

A. Purpose of This Action

The national volume targets of renewable fuel that are intended to be achieved under the RFS program each year (absent an adjustment or waiver by EPA) are specified in CAA section 211(o)(2). The statutory volumes for 2014, 2015, and 2016 are shown in Table I.A–1. The cellulosic biofuel and BBD categories are nested within the advanced biofuel category, which is itself nested within the total renewable fuel category. This means, for example, that each gallon of cellulosic biofuel or BBD that is used to satisfy the individual volume requirements for those fuel types can also be used to satisfy the requirements for advanced biofuel and renewable fuel.

TABLE I.A–1—APPLICABLE VOLUMES SPECIFIED IN THE CLEAN AIR ACT

[Billion ethanol-equivalent gallons] [a]

	2014	2015	2016
Cellulosic biofuel	1.75	3.0	4.25
Biomass-based diesel	≥1.0	≥1.0	≥1.0
Advanced biofuel	3.75	5.5	7.25
Renewable fuel	18.15	20.5	22.25

[a] All values are ethanol-equivalent on an energy content basis, except values for BBD which are given in actual gallons.

Under the RFS program, EPA is required to determine and publish annual percentage standards for each compliance year. The percentage standards are calculated so as to ensure use in transportation fuel of the national ''applicable volumes'' of the four types of biofuel (cellulosic biofuel, BBD, advanced biofuel, and total renewable fuel) that are either set forth in the Clean Air Act or established by EPA in accordance with the Act's requirements. The percentage standards are used by obligated parties (generally, producers and importers of gasoline and diesel fuel) to calculate their individual compliance obligations. Each of the four percentage standards is applied to the volume of non-renewable gasoline and diesel that each obligated party produces or imports during the specified calendar year to determine their individual volume obligations with respect to the four renewable fuel types.

EPA is proposing annual applicable volume requirements for cellulosic biofuel, advanced biofuel, and total renewable fuel for 2014, 2015, and 2016, and for BBD for 2014, 2015, 2016, and 2017. Table I.A–2 lists the statutory provisions and associated criteria relevant to determining the national applicable volumes used to set the percentage standards in this proposed rule.

TABLE I.A–2—STATUTORY PROVISIONS FOR DETERMINATION OF APPLICABLE VOLUMES

Applicable volumes	Clean Air Act reference	Criteria provided in statute for determination of applicable volume
Cellulosic biofuel	211(o)(7)(D)(i)	Required volume must be lesser of volume specified in CAA 211(o)(2)(B)(i)(III) or EPA's projected volume in coordination with other federal agencies.
	211(o)(7)(A)	EPA may waive the statutory volume in whole or in part if implementation would severely harm the economy or environment of a State, region, or the United States, or if there is an inadequate domestic supply.
Biomass-based diesel [8]	211(o)(2)(B)(ii) and (v).	Required volume for years after 2012 must be at least 1.0 billion gallons, and must be based on a review of implementation of the program, coordination with other federal agencies, and an analysis of specified factors.
	211(o)(7)(A)	EPA may waive the statutory volume in whole or in part if implementation would severely harm the economy or environment of a State, region, or the United States, or if there is an inadequate domestic supply.
Advanced biofuel	211(o)(7)(D)(i)	If applicable volume of cellulosic biofuel is reduced below the statutory volume to the projected volume, EPA may reduce the advanced biofuel and total renewable fuel volumes in CAA 211(o)(2)(B)(i)(I) and (II) by the same or lesser volume. No criteria specified.
	211(o)(7)(A)	EPA may waive the statutory volume in whole or in part if implementation would severely harm the economy or environment of a State, region, or the United States, or if there is an inadequate domestic supply.
Total renewable fuel	211(o)(7)(D)(i)	If applicable volume of cellulosic biofuel is reduced below the statutory volume to the projected volume, EPA may reduce the advanced biofuel and total renewable fuel volumes in CAA 211(o)(2)(B)(i)(I) and (II) by the same or lesser volume. No criteria specified.
	211(o)(7)(A)	EPA may waive the statutory volume in whole or in part if implementation would severely harm the economy or environment of a State, region, or the United States, or if there is an inadequate domestic supply.

[8] Section 211(o)(7)(E) also authorizes EPA to issue a temporary waiver of applicable volumes of BBD where EPA determines that there is a significant feedstock disruption or other market circumstance that would make the price of BBD fuel increase significantly.

In November 2013, we proposed standards for cellulosic biofuel, BBD, advanced biofuel, and total renewable fuel for calendar year 2014.[9] We received over 340,000 comments representing widely diverging views on such topics as opportunities and constraints associated with the E10 blendwall, the ability of the market to respond to forward-leaning standards, the permissible interpretation of statutory waiver authorities, and the intent of Congress. In December 2014, we published a **Federal Register** notice in which we noted the substantial number of comments and the concerns of commenters, and stating that EPA had been evaluating the issues raised in light of the purposes of the statute and the Administration's commitment to the goals of the statute to increase the use of renewable fuels.[10] We further indicated in that notice that finalization of the 2014 standards rule had been significantly delayed and that, due to this delay and given ongoing consideration of the issues presented by the commenters, EPA would not be in a position to finalize the 2014 RFS standards before the end of 2014. We concluded that the approach in the November 2013 proposal, projecting volume growth into the-then future, was not an appropriate way to set standards in late 2014, for a year that was largely over. Since the approach we proposed in November 2013 would need to be substantially modified to reflect the delay in issuing the rule and actual renewable fuel use during the earlier part of 2014, the action indicated that we intended to finalize the 2014 standards in 2015.

Not only is 2014 over, but this proposal is being released well into 2015. We believe that the standards we set should take these facts into account as we make an effort to return to the annual standard-setting schedule in the statute. Therefore, we plan on finalizing the applicable standards for 2014, 2015, and 2016 by November of this year. Moreover, the terms of a proposed consent decree to resolve pending litigation concerning EPA's failure to establish standards for 2014 and 2015 by the statutory deadline include a requirement for EPA to promulgate final standards for 2014 and 2015 by November 30, 2015.[11] By re-proposing the 2014 standards along with a proposal for the 2015 and 2016 standards, we are not only able to formulate a proposal for public comment that takes into account the fact that 2014 is over and the specific approach described in the November 2013 Notice of Proposed Rulemaking (NPRM) is no longer applicable, but we can also coordinate the proposed treatment of 2014 with the proposed treatment of 2015 wherein part of the year has likewise already passed. We are therefore withdrawing the November 2013 NPRM; this proposal replaces and supersedes that earlier proposal. While the many comments we received on the November 2013 NPRM informed the development of this proposal, we do not intend to specifically respond to comments on the prior proposal, and we encourage members of the public to submit new comments that are tailored to this new proposal. Given the substantial task before the Agency to issue a final rule applicable to three calendar years by November 30, 2015, we encourage commenters to submit concise comments, and not to re-submit comments submitted on the withdrawn proposal except to the extent that they have determined them to be relevant under this proposal.

As shown in Table I.A–2, the statutory authorities that provide direction to EPA for how to modify or set the applicable standards differ for the four categories of renewable fuel. Under the statute, EPA must annually determine the projected volume of cellulosic biofuel production for the following year. If the projected volume of cellulosic biofuel production is less than the applicable volume specified in section 211(o)(2)(B)(i)(III) of the statute, EPA must lower the applicable volume used to set the annual cellulosic biofuel percentage standard to the projected volume of production during the year. In Section IV of this proposed rule, we present our analysis of cellulosic biofuel production and proposed volumes for 2014, 2015, and 2016. This analysis is based on our evaluation of producers' production plans and progress to date following discussions with cellulosic biofuel producers.

With regard to BBD, CAA section 211(o)(2)(B) specifies the applicable volumes of BBD to be used in the RFS program only through year 2012. For subsequent years the statute sets a minimum volume of 1 billion gallons, and directs EPA to set the required volume after consideration of a number of factors. In Section III of this preamble we discuss our proposed volume requirements for BBD for 2014, 2015, 2016, and 2017.

Regarding advanced biofuel and total renewable fuel, Congress provided several mechanisms through which those volumes could be reduced if necessary. If we lower the applicable volume of cellulosic biofuel below the volume specified in CAA 211(o)(2)(B)(i)(III), we also have the authority to reduce the applicable volumes of advanced biofuel and total renewable fuel by the same or a lesser amount. We may also reduce the applicable volumes of any of the four renewable fuel types under the general waiver authority provided at CAA 211(o)(7)(A) if EPA finds that implementation of the statutory volumes would severely harm the economy or environment of a State, region, or the United States, or if there is inadequate domestic supply. Section II of this proposed rule describes our intended use of both the cellulosic waiver authority and the general waiver authority to reduce volumes of advanced biofuel and total renewable fuel to address three important realities:

- Substantial limitations in the supply of cellulosic biofuel,
- Insufficient supply of other advanced biofuel to offset the shortfall in cellulosic biofuel, and
- Practical and legal constraints on the supply of ethanol blends to the vehicles that can use them (in the form of E10, E15, and higher level ethanol blends), driven in part by lower gasoline consumption than was expected in 2007 when the target statutory volumes were established.

We believe these realities justify the exercise of the authority Congress provided us to waive the statutory volumes. At the same time, we believe our exercise of the waiver authorities should be consistent with the objectives of the statute to grow renewable fuel use over time. We are proposing to use the waiver authorities to derive applicable volumes that reflect the maximum volumes that can reasonably be expected to be produced and consumed. Thus, while the standards that we set must be achievable, we believe that they must also reflect the power of the market to respond to the standards we set to drive positive change in renewable fuel production and use.

We are proposing to exercise our authority to reduce volumes of advanced biofuel and total renewable fuel only to the extent necessary to remove the inadequacy in supply. That is, our objective in exercising the general waiver authority is to set the volume requirements at the boundary between an adequate domestic supply and an inadequate domestic supply.[12] One way of expressing this

[9] 78 FR 71732, November 29, 2013.

[10] 79 FR 73007, December 9, 2014.

[11] See American Fuel and Petrochemical Manuf. et al v. EPA (No. 15–cv–394, D.D.C.).

[12] As discussed in Section II.A, EPA has considerable discretion in exercising the cellulosic waiver authority, and is not constrained to consider any particular factor or list of factors in doing so. Nevertheless, EPA is proposing to base its exercise of the cellulosic waiver authority on the same general considerations justifying its use of the general waiver authority—availability of renewable fuel and the legal and practical constraints on their supply to vehicles and other qualifying uses. We invite comment on this approach.

objective is to say we are seeking to determine the maximum volumes of renewable fuel that can be expected to be achieved in light of supply constraints. This is a very challenging task not only in light of the myriad complexities of the fuels market and how individual aspects of the industry might change in the future, but also because we cannot precisely predict how the market will respond to the volume-driving provisions of the RFS program. Thus the determination of the maximum achievable volumes is one that we believe necessarily involves considerable exercise of judgment. To this end, we are proposing ''maximum achievable'' volumes of advanced biofuel and total renewable fuel in this package that reflect our judgment as to where the boundary between adequate domestic supply and inadequate domestic supply might fall, particularly for 2015 and 2016.

On the basis of the authorities provided in the statute, we have evaluated the supply of qualifying advanced biofuel and total renewable fuels in light of the three limitations described above and other relevant factors. Based on this evaluation, and after consultation with the Departments of Agriculture and Energy, we believe that adjustments to the statutory volumes of advanced biofuel and total renewable fuel are warranted for 2014, 2015, and 2016. The proposed volumes for advanced biofuel and total renewable fuel for 2015 and 2016 would lead to growth in supply beyond 2014 based on the expectation that the market can and will respond to the standards we set. Similarly, we are proposing growth in the required volume of BBD in such a way that both the biodiesel market and other advanced biofuels would grow.[13] The volumes that we are proposing for 2014, 2015, and 2016 are shown below.

TABLE I.A–3—PROPOSED VOLUME REQUIREMENTS [A]

	2014	2015	2016
Cellulosic biofuel (million gallons)	33	106	206
Biomass-based diesel (billion gallons)	1.63	1.70	1.80
Advanced biofuel (billion gallons)	2.68	2.90	3.40
Renewable fuel (billion gallons)	15.93	16.30	17.40

[a] All values are ethanol-equivalent on an energy content basis, except for BBD which is biodiesel-equivalent.

[13] In addition to the volume requirements shown in Table I.A–3 for 2014, 2015, and 2016 for all four categories of renewable fuel, this action also proposes a volume requirement of 1.9 billion gallons for BBD in 2017.

B. Summary of Major Provisions in This Action

This section briefly summarizes the major provisions of this proposal. We are proposing applicable volume requirements for cellulosic biofuel, BBD, advanced biofuel, and total renewable fuel for 2014, 2015, and 2016, as well as the applicable volume requirement for BBD for 2017. The following sub-section summarizes our approach to determining the proposed requirements. This action also includes a proposed response to several requests we received in 2013 for a waiver of the 2014 standards. We are also proposing an amendment to the regulations designed to clarify the scope of the algal biofuel pathway. Finally, we are proposing new deadlines for annual compliance reporting and attest reporting for the 2013, 2014 and 2015 compliance years.

1. Proposed Approach To Setting Standards for 2014, 2015, and 2016

Because 2014 has passed, the final rule cannot alter the volumes of renewable fuel produced and consumed during 2014. We believe it is appropriate, therefore, that the standards we establish for 2014 reflect the actual supply in 2014. Similarly, this rulemaking can only have a partial impact on the volumes of renewable fuel produced and consumed in 2015. Although we believe that the standards we set for advanced biofuel and total renewable fuel must be ambitious to be consistent with the intent of Congress in establishing the RFS program, we also recognize that the standards we set cannot affect the past. Therefore, in this action we are proposing to base the applicable volume requirements for 2014 on actual renewable fuel use, as determined by data on the number of Renewable Identification Numbers (RINs) generated from the EPA-Moderated Transaction System (EMTS), minus the number of RINs retired to account for renewable fuel export as reported by the Energy Information Administration (EIA) or retired for other purposes unrelated to demonstrating compliance with the annual standards as reported through EMTS.[14] While this approach would result in exactly the number of 2014 RINs available for compliance that would be needed for compliance with the 2014 standards, we recognize that it does not guarantee that every individual obligated party will have the exact number of 2014 RINs needed for compliance with its individual RVOs. Thus there may be some costs associated with the reallocation of 2014 RINs to those obligated parties that need them. However, such disproportionate RIN holdings can occur in any year. We do not believe it would be appropriate to exercise our waiver authority to reduce the 2014 standards below the number of 2014 RINs available for compliance. Rather, we believe that we should rely on the market to sort out the distribution of RINs among obligated parties.

Similarly for 2015, we are proposing to account for the fact that the final standards will be limited in their ability to affect supply prior to the final rule. For 2016, our proposed volume requirements are based on the expectation that the entire calendar year will be available for obligated parties and the fuels markets to plan for and come into compliance.

We are proposing the same approach to assessing past supply in the standard-setting process for all four renewable fuel categories. However, we are proposing that projections of supply for months after issuance of the NPRM would be determined differently for the four renewable fuel categories. For advanced biofuel and total renewable fuel, assessment of future supply would simultaneously reflect the statute's purpose to drive growth in renewable fuels, while also accounting for constraints in the market that make the volumes specified in the statute beyond reach, as described more fully in Section II. For the BBD standard, growth would be based on an analysis of a set of factors stipulated in CAA 211(o)(2)(B)(ii), as described in more detail in Section III. Finally, as described in Section IV, the applicable volume of cellulosic biofuel would be based on a projection of production that reflects a neutral aim at accuracy as

[14] A RIN is a unique number generated by the producer and assigned to each gallon of a qualifying renewable fuel under the RFS program, and is used by refiners and importers to demonstrate compliance with the volume requirements under the program. RINs may be retired for a number of reasons, including to account for renewable fuel spills or to correct for RIN generation errors.

required by the United States Court of Appeals for the District of Columbia Circuit in *API v. EPA*, 706 F.3d 474 (January 25, 2013).

2. Advanced Biofuel and Total Renewable Fuel

Since the EISA-amended RFS program began in 2010, we have reduced the applicable volume of cellulosic biofuel each year in the context of our annual RFS standards rulemakings to the projected production levels, and we have considered whether to also reduce the advanced biofuel and total renewable fuel statutory volumes pursuant to the waiver authority in section 211(o)(7)(D)(i). In the past we have focused primarily on the availability of advanced biofuels in determining whether reductions in the required volume of cellulosic biofuel should be accompanied by reductions in the required volumes of advanced biofuel and total renewable fuel. The total volume of renewable fuel in the form of ethanol that could realistically be supplied to vehicles as either E10 or higher ethanol blends given various constraints was not a limiting factor in the standard-setting process in prior years. Furthermore, the availability of non-cellulosic advanced biofuels was determined to be sufficient to overcome the shortfall in cellulosic biofuel. However, for 2014 and later years, neither of these two factors remains true, and as a result we are proposing reductions for these categories of renewable fuel for 2014, 2015, and 2016 using the waiver authorities provided in CAA 211(o)(7).

Our determination in this proposal that the required volumes of advanced biofuel and total renewable fuel should be reduced from the statutory targets is based on a consideration of the ability of the market to supply such fuels through domestic production or import and the ability of available renewable fuels to be used as transportation fuel, heating oil, or jet fuel.[15] For example, the potential use of renewable fuels as transportation fuel, heating oil, or jet fuel depends in part on the infrastructure available for distributing, blending, and dispensing renewable fuels, as well as the vehicles in the fleet capable of consuming various renewable fuels. As described in more detail in Section II.A, we believe that the availability of qualifying renewable fuels and constraints on their supply to vehicles that can use them are valid considerations under both the cellulosic waiver authority under section 211(o)(7)(D)(i) and the general waiver authority under section 211(o)(7)(A). We are proposing to use the waiver authorities in a limited way that reflects our understanding of how to reconcile real marketplace constraints with Congress' intent to promote growth in renewable fuel use over time.

We have projected applicable volumes for advanced biofuel and total renewable fuel for 2015 and 2016 that would result in significant volume growth over the levels supplied in previous years, and which in our judgment are as ambitious as can reasonably be justified. The proposed volume requirements for 2015 and 2016 reflect the growth rates in both categories of renewable fuel that can be attained under a program explicitly designed to be ''market-driving,'' and that would not be expected to occur in the absence of those volume requirements.

3. Biomass-Based Diesel

A key issue before the Agency in considering the appropriate biomass-based diesel (BBD) applicable volume is the extent to which a portion of the advanced biofuel volume requirement should be set aside exclusively for BBD. In EISA, Congress chose to set aside a portion of the advanced biofuel standard for BBD, but only through 2012. Beyond 2012 Congress stipulated that EPA, in coordination with other agencies, was to establish the BBD volume taking into consideration the history of the program and various specified factors, providing that the required volume could not be less than 1.0 billion gallons. For 2013, EPA established an applicable volume of 1.28 billion gallons. The BBD standards in practice only establish the minimum volume required; substantially higher volumes have been used in past years to help satisfy the advanced biofuel standard. If BBD outcompetes other advanced biofuels in the marketplace as occurred in 2013, then the BBD standard serves as a floor and not a ceiling. Indeed, only 1.28 billion gallons of BBD were required in 2013, yet 1.55 billion gallons were supplied by the market.[16] Furthermore, the total renewable standard can provide an incentive for even more BBD and other advanced biofuels to be supplied than is actually required, as also occurred in 2013: While the applicable advanced biofuel volume requirement was 2.75 billion ethanol-equivalent gallons, the market actually supplied 3.02 billion ethanol-equivalent gallons, and most of this was BBD.

To preserve the important role that BBD plays in the RFS program, as well as to ensure that higher volume requirements for advanced biofuel can be reached, we believe that it would be appropriate to increase the BBD volume requirement for each year in the 2015 to 2017 time period. However, we also believe that it is of ongoing importance that opportunities for other types of advanced biofuel be expanded, such as renewable diesel co-processed with petroleum, renewable gasoline blendstocks, and heating oil, as well as others that are under development. Thus, based on a review of the implementation of the program to date and all the factors required under the statute, we are not only proposing to set the 2014 BBD volume requirement at the actual volume of 1.63 billion gallons, but we are also proposing increases in the applicable volume of BBD to 1.7, 1.8, and 1.9 billion gallons for the years 2015, 2016, and 2017, respectively. We believe that these increases would support the overall goals of the program while also maintaining the incentive for development and growth in production of other advanced biofuels. We believe establishing the volumes at these levels will encourage BBD producers to manufacture higher volumes of fuel that will contribute to the advanced biofuel and total renewable fuel requirements, while also leaving considerable opportunity within the advanced biofuel mandate for investment in and production of other types of advanced biofuel with comparable or potentially superior environmental or other benefits.

4. Cellulosic Biofuel

The cellulosic biofuel industry continues to transition from research and development (R&D) and pilot scale operations to commercial scale facilities, leading to significant increases in production capacity. RIN generation from the first commercial scale cellulosic biofuel facility began in March 2013. Cellulosic biofuel production increased substantially in 2014, with over 33 million gallons in that year. Last year also saw the grand openings of multiple new large commercial scale cellulosic ethanol facilities, and a significant number of

[15] While the fuels that are subject to the percentage standards are currently only non-renewable gasoline and diesel, renewable fuels that are valid for compliance with the standards include those used as transportation fuel, heating oil, or jet fuel.

[16] In 2013 1.55 billion gallons of BBD were supplied to the U.S. market. This reflects the sum of domestically produced BBD plus imported BBD minus domestically produced BBD that was exported. This number was developed using the EPA Moderated Transaction System (EMTS) data available at *http://www.epa.gov/otaq/fuels/rfsdata/2013emts.htm* (last accessed May 20, 2015)

cellulosic biofuel RINs generated using cellulosic biogas through a new pathway approved by EPA in 2014. For 2014 we are proposing a cellulosic biofuel standard of 33 million gallons, consistent with the total number for RINs generated in 2014 that may be used toward satisfying an obligated party's cellulosic biofuel obligation (both cellulosic biofuel (D3) and cellulosic diesel (D7) RINs.) We are also proposing a cellulosic biofuel standard of 106 million ethanol-equivalent gallons for 2015 and 206 million ethanol-equivalent gallons in 2016 based on the information we have received regarding individual facilities' capacities, production start dates and biofuel production plans, as well as input from other government agencies, and EPA's own engineering judgment.

As part of estimating the volume of cellulosic biofuel that would be made available in the U.S. in 2015 and 2016, we researched all potential production sources by company and facility. This included sources that were still in the planning stages, facilities that are under construction, facilities that are in the commissioning or start-up phases, and facilities that are already producing some volume of cellulosic biofuel. Facilities primarily focused on research and development were not the focus of our assessment, as production from these facilities represents very small volumes of cellulosic biofuel, and these facilities typically have not generated RINs for the fuel they have produced. From this universe of potential cellulosic biofuel sources, we identified the subset that is expected to produce commercial volumes of qualifying cellulosic biofuel for use as transportation fuel, heating oil, or jet fuel by the end of 2016. To arrive at projected volumes, we collected relevant information on each facility. We then developed projected production ranges based on factors such as the current and expected state of funding, the status of the technology being used, progress towards construction and production goals, facility registration status, production volumes achieved, and other significant factors that could potentially impact fuel production or the ability of the produced fuel to qualify for cellulosic biofuel RINs. We also used this information to group these companies based on production history and to select a value within the aggregated projected production ranges that we believe best represents the most likely production volumes from each group for each year. Further discussion of these factors and the way they were used to determine our proposed cellulosic biofuel projections for 2014, 2015, and 2016 can be found in Section IV.

5. Annual Percentage Standards

The renewable fuel standards are expressed as a volume percentage and are used by each refiner and importer of fossil-based gasoline or diesel to determine their renewable fuel volume obligations. The percentage standards are set so that if each obligated party meets the standards, and if EIA projections of gasoline and diesel use for the coming year prove to be accurate, then the amount of renewable fuel, cellulosic biofuel, BBD, and advanced biofuel actually used will meet the volumes required on a nationwide basis.

Four separate percentage standards are required under the RFS program, corresponding to the four separate renewable fuel categories shown in Table I.A–1. The specific formulas we use in calculating the renewable fuel percentage standards are contained in the regulations at 40 CFR 80.1405 and repeated in Section V.B.1. The percentage standards represent the ratio of renewable fuel volume to projected non-renewable gasoline and diesel volume. The volume of transportation gasoline and diesel used to calculate the proposed percentage standards was derived from EIA projections. The proposed standards for 2014, 2015, and 2016 are shown in Table I.B.5–1. Detailed calculations can be found in Section V, including the projected gasoline and diesel volumes used.

TABLE I.B.5–1—PROPOSED PERCENTAGE STANDARDS

	2014 (%)	2015 (%)	2016 (%)
Cellulosic biofuel	0.019	0.059	0.114
Biomass-based diesel	1.42	1.41	1.49
Advanced biofuel	1.52	1.61	1.88
Renewable fuel	9.02	9.04	9.63

6. Response To Requests for a Waiver of the 2014 Standards

Concurrently with the November 29, 2013 proposal for 2014 RFS standards, we also published a separate **Federal Register** Notice [17] indicating that the American Petroleum Institute (API) and the American Fuel & Petrochemical Manufacturers (AFPM) had submitted a joint petition requesting a partial waiver of the 2014 applicable RFS volumes, and that several individual refining companies had also submitted similar petitions. We noted that any additional similar requests would also be docketed and considered together with requests already received. EPA has subsequently received additional waiver petitions, including those submitted by nine Governors.[18]

The petitions generally asserted that for 2014 there is an inadequate domestic supply of renewable fuel and therefore RINs, due both to E10 blendwall constraints, and limitations on the supply of higher level ethanol blends, and of non-ethanol renewable fuels. Certain of the petitioners argued that this inadequate supply of renewable fuel (and RINs) will lead to an inadequate supply of gasoline and diesel, because refiners and importers, faced with a shortage of RINs, will reduce their production of gasoline and diesel for the domestic market. They argued that this will in turn severely harm the economy.

As calendar year 2014 has passed, we believe it is appropriate to set the applicable volume requirements at the volumes that were actually supplied in 2014. We do not believe that use of 2014 renewable fuel volumes severely harmed the economy, and we believe that it is straightforward to conclude that there was an adequate supply of the volumes of renewable fuel that were actually used in 2014. Therefore, we do not believe that adequate justification exists for setting the 2014 volume requirements at levels below those actually supplied. We propose that our final action in this rulemaking will resolve the extent to which waivers are appropriate for 2014 and, therefore, will identify the scope of relief that should be accorded petitioners.

7. Proposed Changes to Regulations

In addition to proposing the aforementioned volume requirements and associated percentage standards, we are also proposing amendments to the RFS requirements to address two issues. First, we are proposing changes with respect to the existing algal oil pathway to clarify that only biofuels produced from oil from algae grown photosynthetically qualify for the RFS program under this pathway. We are aware of several companies that plan to produce biofuels from algae that use non-photosynthetic types of

[17] 78 FR 71732 (November 29, 2013) and 78 FR 71607 (November 19, 2013), respectively.

[18] EPA has received, to date, waiver petitions from Governors Deal (GA), Fallin (OK), Perry (TX), Otter (ID), LePage (ME), Martinez (NM), McCrory (NC), Herbert (UT), and Haley (SC). In addition to the waiver petition from API/AFPM, EPA has also received waiver petitions from the following companies: Delek, ExxonMobil, Holly Frontier, Lion Oil Petroleum, Marathon Oil, NCRA, PBF Holding Company, Phillips 66, and Tesoro.

metabolism. Companies wishing to produce biofuels from algae grown with a non-photosynthetic stage of growth must apply to EPA for approval of their pathway pursuant to 40 CFR 80.1416. Since EPA assumed that algae would be grown photosynthetically when it evaluated the lifecycle greenhouse gas emissions associated with the existing algal oil pathway, we are clarifying the regulatory description of the pathway to align with EPA's technical assessment and interpretation of the scope of this pathway.

We are also proposing to revise the annual compliance reporting deadlines for obligated parties and renewable fuel exporters, and the attest engagement reporting deadlines for obligated parties, RIN-generating renewable fuel producers and importers, other parties holding RINs, renewable fuel exporters, and independent third-party auditors for the 2013, 2014 and 2015 compliance years. The proposed deadlines would vary for each of these parties depending on the applicable compliance period, and some parties would be required to submit partial annual reports representing a portion of the 2014 compliance year. A detailed description of our proposed changes to reporting deadlines can be found in Section VI.B.

C. Authority for Late Action and Applicability of the Standards

Under CAA 211(o)(3)(B)(i), EPA must determine and publish the annual percentage standards by November 30 of the preceding year, and it must establish applicable volumes for biomass-based diesel 14 months in advance of the compliance year. EPA did not meet the statutory deadline for the 2014 or the 2015 percentage standards, nor the 2014, 2015, and 2016 biomass-based diesel applicable volumes. Nevertheless, we are proposing that the percentage standards established through this rulemaking would apply to all gasoline and diesel produced or imported in calendar years 2014, 2015, or 2016 as applicable.

We acknowledge that this rule is being proposed later than the statutory deadlines noted above. However, this delay does not deprive EPA of authority to issue applicable volumes and standards for these calendar years. The United States Court of Appeals for the District of Columbia Circuit recently upheld the 2013 RFS standards even though they were issued more than eight months after statutory deadline. *Monroe Energy* v. *EPA*, 750 F.3.d 909 (D.C. Cir. 2014). The court noted that it had resolved the question of EPA's authority to issue RFS standards after the statutory deadline for issuing the annual RFS standards in *NPRM* v. *EPA*, 630 F.3d 145 (D.C. Cir. 2010). In that case, the court explained that courts have declined to treat a statutory direction that an agency ''shall'' act within a specified time period as a jurisdictional limit that precludes action later. Id. at 154 (citing *Barnhart* v. *Peabody Coal*, 537 U.S. 149, 158 (2003)). Moreover, the court noted that the statute here requires that EPA regulations ''ensure'' that transportation fuel sold or introduced into commerce ''on an annual average basis, contains at least the volumes of renewable fuel'' that are required pursuant to the statute. Id. at 152–153. This statutory directive requires EPA action, even if late. Therefore EPA believes it has authority to issue RFS standards for calendar years 2014 and 2015, and biomass-based diesel applicable volumes for 2014–2016, notwithstanding EPA's delay.

EPA proposes to exercise its authority to issue standards applicable to past time periods in a reasonable way. Thus, for 2014, EPA is proposing to establish renewable fuel obligations that reflect actual renewable fuel used as transportation fuel, heating oil, or jet fuel during that time period, and the proposed compliance deadline for 2014 allows time for obligated parties to complete necessary transactions. For 2015 we are similarly proposing to take into account actual renewable fuel use during the time that has already passed in 2015. Renewable fuel producers generated RINs throughout 2014, and have also been generating 2015 RINs since the beginning of the calendar year. To varying degrees, obligated parties have been acquiring RINs since the beginning of 2014 in anticipation of the publication of final volume requirements and standards. While we acknowledge the uncertainty that the market has experienced due to the delay, our proposal to determine the applicable requirements to account for past production for both 2014 and 2015 means that there will be an adequate quantity of RINs available to satisfy those portions of the proposed requirements.[19] In addition, there are a number of program flexibilities that will facilitate compliance. There is a considerable bank of carryover RINs that can be used to comply with up to 20% of the 2014 RVOs, and to the extent it is not used, that bank of carryover RINs can be rolled forward to assist in compliance with 2015 and 2016 requirements. We acknowledge that there is a theoretical possibility that parties that accumulate RINs through their own blending activities could decide to bank the maximum quantity of RINs for their own future use or for future sale, and that if this practice were widespread that there could be a shortfall in available RINs for parties who do not engage in renewable fuel blending activities themselves and have not entered into sufficient contracts with blenders or other parties to acquire sufficient RINs. Such practices are possibilities in any competitive marketplace, and we believe that obligated parties have had sufficient experience with the RFS program to have taken precautionary measures to avoid such results and to be prepared to comply with applicable standards potentially as high as the statute requires. Even where they have not done so, and find compliance with a given year's standards infeasible, they may avail themselves of the option of carrying a compliance deficit forward for that compliance year to the next. In sum, we believe that EPA's proposed approach is authorized and reasonable, though late.

[19] Furthermore, although EPA is late in establishing applicable volumes for biomass-based diesel for 2015 and 2016, we are proposing to set the applicable volumes of BBD for these years at levels below what we anticipate can actually be produced and used for compliance with the advanced biofuel requirements. Therefore, there should be a more than adequate supply of BBD RINs for compliance with the standards proposed.

D. Outlook for 2017 and Beyond

We recognize that a number of challenges must be overcome in order to fully realize the potential for greater use of renewable fuels in the United States. We also recognize that the RFS program plays a central role in creating the incentives for realizing that potential. The standards being proposed would require that significant progress is made in overcoming those challenges. We expect future standards to both reflect and anticipate progress of the industry and market in providing for continued expansion in the supply of renewable fuels.

We believe that the supply of renewable fuels can continue to increase in the coming years despite the constraints associated with shortfalls in cellulosic biofuel production and other advanced biofuels, and constraints associated with supplying renewable fuels to the vehicles and engines that can use them. As described in Section II.B, we believe that the market is capable of responding to ambitious standards by expanding infrastructure and modifying fuel pricing to provide incentives for the production and use of renewable fuels. While we do not believe that the statutory volumes can be reached within the next several years, the market is capable of attaining

volumes significantly higher than in the past.

In future years, we would expect to use the most up-to-date information available to project the growth that can realistically be achieved considering the ability of the RFS program to spur growth in the volume of ethanol, biodiesel, and other renewable fuels that can be supplied and consumed by vehicles. In particular we will focus on the emergence of advanced biofuels including cellulosic biofuel. Many companies are continuing to invest in efforts ranging from research and development to the construction of commercial-scale facilities to increase the production potential of next generation biofuels. We will continue to evaluate new pathways especially for advanced biofuels and respond to petitions, expanding the availability of feedstocks, production technologies, and fuel types eligible under the RFS program.

In addition to ongoing efforts to evaluate new pathways for advanced biofuel production, we are aware that other actions can also play a role in improving incentives provided by the RFS program to overcome challenges that limit the potential for increased volumes of renewable fuels. Such actions could potentially include amendments to program regulations that would help enable and potentially accelerate growth in renewable fuel volumes over time. We are currently considering ideas and various options for such actions. The details of such actions are beyond the scope of this current rulemaking, but we will continue to engage interested stakeholders as we move forward.

There are also other approaches to determining volume requirements for future years that have been suggested as potentially helping to ensure growth in supply of renewable fuel. For instance, our proposed approach to determining the volume requirements for advanced biofuel and total renewable fuel in 2015 and 2016 is one of determining the maximum achievable supply by acknowledging constraints on supply to consumers resulting from the E10 blendwall, limitations in production and import capabilities, and the ability of the market to respond to the standards we set. As described in Section II.D.2, there are a variety of ways that the market could respond to our proposed standards.

However, we recognize that since the majority of renewable fuel today is currently consumed as 10 percent ethanol blends, changes in demand for gasoline can have a significant impact on the ability of the marketplace to blend fixed volumes of renewable fuels. As such, an alternative approach to characterizing expected growth in renewable fuels would be to project the share of the fuel pool that can reasonably be expected to be comprised of renewable fuel over time. In this way, increases or decreases in gasoline demand would be reflected in corresponding increases or decreases in mandated renewable fuel volumes. The distinction between volumes and renewable share (share of the market, expressed as a percentage) is not important once the annual standards are established because the volumes are converted to shares (percentage standards) and changes in gasoline and diesel fuel volume then automatically lead to corresponding changes in renewable fuel volumes. However, future gasoline consumption depends on many factors and is highly uncertain; there may be unanticipated changes in fuel consumption compared to current EIA projections, as there have been in the past. For example, if EPA were to adopt an outlook for future years based on a growth rate for the renewable share of the fuel pool, it would be easier to maintain such a growth rate—rather than maintaining an outlook for specific volumes—if gasoline consumption becomes unexpectedly low. We recognize that projections of expected future growth in renewable fuels can be expressed in terms of either absolute volumes or as a share of the transportation fuel pool, that stakeholders may see advantages in the latter, and we expect there may be additional conversation on this issue in the future.

II. Proposed Advanced Biofuel and Total Renewable Fuel Volumes for 2014–2016

The national volume targets of advanced biofuel and total renewable fuel to be used under the RFS program each year are specified in CAA section 211(o)(2). However, two statutory provisions authorize EPA to reduce these volumes under certain circumstances. EPA may reduce these volumes to the extent that we reduce the applicable volume for cellulosic biofuel, or if the criteria are met under the general waiver authority.[20] We have evaluated the capabilities of the market and have determined that the volumes for advanced biofuel and total renewable fuel specified in the statute cannot be achieved in 2014—2016. As a result we are proposing to exercise our discretion under these statutory provisions to reduce the applicable volumes of advanced biofuel and total renewable fuel to address limitations in production or importation of these fuels, and factors that limit supplying them to vehicles that can consume them.

While we are proposing to use our waiver authorities under the law to reduce applicable volumes from the statutory levels, the proposed volume requirements are nevertheless intended to drive significant growth in renewable fuel use beyond what would occur in the absence of such requirements. The proposed volume requirements are intended to be market-driving while staying within the limits of feasibility. The net impact of these proposed volume requirements is that the necessary volumes of both advanced biofuel and conventional (non-advanced) renewable fuel would increase over levels used in the past. The volumes that we are proposing are shown below.

TABLE II–1—PROPOSED VOLUME REQUIREMENTS

[Billion gallons]

	2014	2015	2016
Advanced biofuel	2.68	2.90	3.40
Total renewable fuel	15.93	16.30	17.40

A. Statutory Authorities for Reducing Volumes To Address Renewable Fuel Availability and the E10 Blendwall

Congress specified increasing annual volume objectives in the statute for total renewable fuel, advanced biofuel, and cellulosic biofuel for every year through 2022, and for biomass-based diesel (BBD) through 2012, and authorized EPA to set volume objectives for subsequent years after consideration of several specified factors. However, Congress recognized that circumstances could arise that might require a reduction in the volume objectives specified in the statute as evidenced by the waiver provisions in CAA 211(o)(7). As described below, we believe that limitations in production or importation of qualifying renewable fuels, and factors that limit supplying those fuels to the vehicles that can consume them, both constitute circumstances that warrant a waiver under section 211(o)(7). The decrease in total gasoline consumption in recent years which resulted in a corresponding and proportional decrease in the maximum amount of ethanol that can be consumed if all gasoline was E10, the limited number and geographic distribution of retail stations that offer higher ethanol blends such as E15 and E85, the number of FFVs that have access to E85, as well

[20] See CAA section 211(o)(7)(D) and (A).

as other market factors, combine to place significant restrictions on the volume of ethanol that can be supplied to vehicles at the present time. Based on our assessment of the maximum amount of renewable fuel that can be supplied in 2014, 2015 and 2016 in light of these constraints, we believe that circumstances exist that warrant a reduction in the statutory applicable volumes of advanced biofuel and total renewable fuel for 2014, 2015 and 2016.

EPA is proposing to use two separate and complementary legal authorities to set required volumes of advanced biofuel and total renewable fuel to levels below the volume objectives described in the statute: The cellulosic waiver authority under CAA section 211(o)(7)(D)(i), and the general waiver authority under CAA section 211(o)(7)(A). This section discusses both of these statutory authorities and briefly describes our proposed use of the authorities to determine appropriate reductions in advanced biofuel and total renewable fuel in comparison to the statutory volumes.

As described in Section I, EPA has withdrawn its November 29, 2013 proposed rule to establish 2014 RFS standards, and is re-proposing standards for 2014 that reflect consideration of actual renewable fuel use during 2014. Since the current proposal is substantially different than the previous one, we are generally not providing at this time, and do not intend to provide at the time of our final action on this proposal, a response to comments that were submitted in response to our earlier proposal. However, since this proposal envisions interpretation and use of RFS waiver authorities in essentially the same manner as proposed in the withdrawn NPRM, and since we received a substantial number of comments on that NPRM related to how the waiver authorities should be interpreted and used, we are providing a general response to the major comments we have received from stakeholders on these issues—either in direct response to our November 29, 2013 NPRM or in subsequent dialogue. We have not attempted to respond to all comments on these issues, but instead hope to advance stakeholders' ability to meaningfully comment on this proposal by discussing our consideration to date of the most common comments we have received on these issues.

1. Cellulosic Waiver Authority

Under CAA section 211(o)(7)(D)(i), if EPA determines that the projected volume of cellulosic biofuel production for the following year is less than the applicable volume provided in the statute, then EPA must reduce the applicable volume of cellulosic biofuel to the projected volume available during that calendar year.

Section 211(o)(7)(D)(i) also provides that ''[f]or 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.'' Using this authority, the reductions in total renewable fuel and advanced biofuel can be less than or equal to, but no more than, the amount of reduction in the cellulosic biofuel volume. In prior actions EPA has interpreted this provision as authorizing EPA to reduce both total renewable fuel and advanced biofuel, by the same amount, if EPA reduces the volume of cellulosic biofuel.[21]

The cellulosic waiver provision was recently discussed by the United States Court of Appeals for the District of Columbia Circuit, in the context of its review of EPA's 2013 annual RFS rule. As the Court explained,

> [T]he Clean Air Act provides that if EPA reduces the cellulosic biofuel requirement, as it did here, then it ''may also reduce'' the advanced biofuel and total renewable fuel quotas ''by the same or a lesser volume.'' 42 U.S.C. 7545(o)(7)(D)(i). There is no requirement to reduce these latter quotas, nor does the statute prescribe any factors that EPA must consider in making its decision. See id. In the absence of any express or implied statutory directive to consider particular factors, EPA reasonably concluded that it enjoys broad discretion regarding whether and in what circumstances to reduce the advanced biofuel and total renewable fuel volumes under the cellulosic biofuel waiver provision. *Monroe* v. *EPA*, 750 F.3d 909, 915 (D.C. Cir. 2014).

For the 2013 RFS rule, the Court determined that EPA had reasonably declined to use the cellulosic waiver authority to reduce the advanced and total renewable fuel statutory applicable volumes by analyzing ''the availability of renewable fuels that would qualify as advanced biofuel and renewable fuel, the ability of those fuels to be consumed, and carryover RINs from 2012.'' Id. at 916.

Some stakeholders have suggested that EPA may only exercise the cellulosic waiver authority in circumstances described in Section 211(o)(7)(A) (that is, where there is inadequate domestic supply or severe harm to the environment or economy), or that it must in considering use of the cellulosic waiver authority consider the factors specified in Section 211(o)(2)(B)(ii) that are required considerations when EPA sets applicable volumes for years in which the statute does not do so. Contrary to these comments, the DC Circuit found in *Monroe* that the statute does not prescribe any factors that EPA must consider in making its decision; EPA has broad discretion under Section 211(o)(7)(D)(i) to determine when and under what circumstances to reduce the advanced and total renewable fuel volumes when it reduces the statutory applicable volume of cellulosic biofuel.

In general, we do not believe that it would be consistent with the energy security and greenhouse gas reduction goals of the statute to reduce the applicable volumes of renewable fuel set forth in the statute absent a substantial justification for doing so. When using the cellulosic waiver authority, we believe that there would be a substantial justification in circumstances where qualifying renewable fuels either are not available, or legal and practical constraints limit their supply to vehicles and other qualifying uses. In addition we may on a case-by-case basis consider additional factors on our own initiative, if we determine that such factors may present substantial justification for reducing the statutory volumes, or additional justification for not reducing them, and we will also consider all comments on the matter. Factors considered by EPA in exercising the cellulosic waiver authority may include those specified in Section 211(o)(2)(B)(ii), or other factors that EPA deems relevant in the context of the statutory objectives and program structure. We will identify and evaluate any such factors on a case-by-case basis. For this proposed rulemaking, we have identified the availability of renewable fuels and the legal and practical constraints on their supply to vehicles and other qualifying uses as the factors that justify the proposed exercise of our cellulosic waiver authority. We solicit comment on other relevant factors, and whether the relevant factors would justify reducing advanced and renewable fuel volumes by different amounts.

As discussed in Section IV, we are proposing to reduce the applicable volume of cellulosic biofuel for 2014, 2015 and 2016. We are also proposing to use our cellulosic waiver authority under section 211(o)(7)(D)(i) to reduce the applicable volumes of advanced biofuel and total renewable fuel for these years as a first step in determining the volume requirements to propose. Our proposed justification for doing so is a limitation in the availability of

[21] See 74 FR 24914–15, and 78 FR 49794, August 15, 2013.

qualifying advanced biofuel and constraints on the ability to supply qualifying renewable fuels to the vehicles that use them. We have considered the possible role of carryover RINs in avoiding the need to reduce the statutory applicable volumes, as we did in setting the 2013 RFS standards, but have decided that the availability of carryover RINs should not preclude reducing the applicable volumes for the reasons described in Section II.F. We are proposing to use the cellulosic waiver authority to reduce the advanced biofuel volume to the level of available supply, and are also proposing to use this authority to reduce total renewable volumes by the same amount. However, doing so is, we believe, insufficient to address all the supply limitations applicable to total renewable fuel. Therefore, we are proposing to use the general waiver authority as supplemental authority for the reductions in advanced biofuel and as the sole authority for further reductions in total renewable fuel volumes.[22]

2. General Waiver Authority

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.

We are proposing to use the general waiver authority based on the statute's authorization for the Administrator to act on her own motion on a finding of inadequate domestic supply.[23] We propose to use this authority in a supplemental fashion with respect to the volumes we propose waiving using the cellulosic waiver authority, and as the sole authority for an additional increment of volume reduction for total renewable fuel.

Because the general waiver provision provides EPA the discretion to waive the volume requirements of the Act ''in whole or in part,'' we interpret this section as granting EPA authority to waive any or all of the four applicable volume requirements in appropriate circumstances. Thus, for example, unlike the cellulosic waiver authority, a reduction in total renewable fuel pursuant to the general waiver authority is not limited by the reduction in cellulosic biofuel.

EPA has had only limited opportunity to date to interpret and apply the waiver provision in CAA section 211(o)(7)(A)(ii) related to ''inadequate domestic supply,'' and has never before done so in the context of deriving an appropriate annual RFS standard. As explained in greater detail below, we believe that this ambiguous provision is reasonably and best interpreted to encompass 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 in vehicles.

The waiver provision at CAA 211(o)(7)(A)(ii) is ambiguous in several respects. First, it does not specify what the general term ''supply'' refers to. The common understanding of this term is an amount of a resource or product that is available for use by the person or place at issue.[24] Hence the evaluation of the supply of renewable fuel, a product, is best understood in terms of the person or place using the product. In the RFS program, various parties interact across several industries to make renewable fuel available for use by the ultimate consumers as transportation fuel. Supplying renewable fuel to obligated parties and terminal blenders is one part of this process, while supplying renewable fuel to the ultimate consumer as part of their transportation fuel is a different and later aspect of this process. For example, the renewable fuels ethanol and biodiesel are typically supplied to obligated parties or blenders as a neat fuel, but in almost all cases are supplied to the consumer as a blend with conventional fuel (ethanol blended in gasoline or biodiesel blended in diesel). The waiver provision does not specify what product is at issue (for example, neat renewable fuel or renewable fuel that is blended with transportation fuel) or the person or place at issue (for example, obligated party, blender or ultimate consumer), in determining whether there is an ''inadequate domestic supply.''

The waiver provision also does not specify what factors are relevant in determining the adequacy of the supply. Adequacy of the supply would logically be understood in terms of the parties who use the supply of renewable fuel. Adequacy of supply could affect various parties, including obligated parties, blenders, and consumers. Adequacy of supply with respect to the consumer might well involve consideration of factors different from those involved when considering adequacy of supply to the obligated parties. We believe that interpreting this waiver provision as authorizing EPA to consider the adequacy of supply of renewable fuel to all of the relevant parties, including the adequacy of supply to the ultimate consumer of renewable fuel blended into transportation fuel, is consistent with the common understanding of the terms used in this waiver provision, especially in the context of a fuel program that is aimed at increasing the use of renewable fuel by consumers. In our view, this is the most reasonable and appropriate construction of this ambiguous language in light of the overall policy goals of the RFS program.

EPA has reviewed other fuel related provisions of the Clean Air Act with somewhat similar waiver provisions, and they highlight both the ambiguity of the RFS general waiver provision and the reasonableness of applying it broadly to include adequacy of supply to the ultimate consumer of transportation fuel. For example, CAA section 211(k)(6) contains provisions allowing EPA to defer the application of reformulated gasoline (RFG) in states seeking to opt-in to the program. There are two categories of states that may opt-in: Those with nonattainment classifications indicating a more serious and/or longstanding air quality problem (leading to classification as a Marginal, Moderate, Serious or Severe nonattainment area) and those that do not have such serious concerns, but which are nevertheless within the ''ozone transport region'' established by CAA section 184(a). For the states with

[22] Assuming EPA finalizes a volume reduction for the advanced biofuels that is no larger than the final reduction in the applicable volume of cellulosic biofuel, EPA could rely on only the cellulosic waiver authority for its final action with respect to advanced biofuel.

[23] We note that there are also pending requests pursuant to CAA 211(o)(7(A) from a number of parties for EPA to exercise its waiver authorities to reduce applicable volumes for 2014. While the Administrator is acting on her own motion, she also proposes that to resolve those petitions through and/or consistent with the final rule establishing 2014 volume requirements.

[24] For example, see *http://oxforddictionaries.com/us/definition/american_english/supply* (a stock of a resource from which a person or place can be provided with the necessary amount of that resource: ''*There were fears that the drought would limit the exhibition's water supply.*''); *http://www.macmillandictionary.com/us/dictionary/american/supply* (''*A limited oil supply has made gas prices rise.*'' *and* ''*Aquarium fish need a constant supply of oxygen.*'').

more serious problems that seek to opt-in to the RFS program, section 211(k)(6)(A)(ii) allows EPA to defer application of RFG requirements if EPA determines that ''there is insufficient domestic *capacity to produce* reformulated gasoline.'' (Emphasis added.) However, for states with less serious ozone nonattainment concerns that are part of the ozone transport region, EPA may defer application of RFG requirements if EPA finds that there is ''insufficient *capacity to supply* reformulated gasoline.'' (Emphasis added.) We believe Congress likely intended the ''capacity to supply'' RFG as being broader in scope than the ''capacity to produce'' RFG. This is consistent with the common understanding of the word ''supply' noted above as the amount of a resource or product that is available for use by the person or place at issue. Thus, while a source can have a ''capacity to produce,'' regardless of whether it has a market for its product, the concept of ''supply'' does not occur in isolation, but in reference to the person intending to make use of the product. The term ''capacity to supply'' would therefore be expected to include consideration of the infrastructure needed to deliver RFG to vehicles in the state within the ozone transport region that is seeking to opt in to the program. This distinction in the context of CAA section 211(k)(6) is logical, since Congress can be expected to have put a higher premium on use of RFG in states with the more serious ozone nonattainment issues, thereby constraining EPA discretion to defer RFG requirements to the limited situation where there is ''insufficient capacity to produce'' RFG. For states with less serious problems, it would be logical for Congress to have provided EPA with somewhat more latitude to defer application of RFG, and Congress referred to this broader set of circumstances as situations where there is an ''insufficient capacity to supply'' RFG. The language of the RFS general waiver provision, in comparison, involves use of a single ambiguous phrase, ''inadequate domestic supply,'' without elaboration or clarification as to whether it refers solely to production capacity or also includes additional factors relevant to the ability to supply the fuel to various persons such as the ultimate consumer. As in the RFG provision, however, the adequacy of supply referred to in the RFS general waiver provision can logically—and we believe should—be read to include factors beyond capacity to produce that impact the ability of consumers to use the fuel as a transportation fuel.[25] This would be consistent with Congress's apparent intent in using the term ''supply'' in the context of the RFG provision.

CAA section 211(c)(4)(C)(ii) provides EPA with waiver authority to address ''extreme and unusual fuel or fuel additive supply circumstances . . . which prevent the distribution of an adequate supply of the fuel or fuel additive to consumers.'' The supply circumstances must be the result of a natural disaster, an Act of God, a pipeline or refinery equipment failure or another event that could not reasonably have been foreseen, and granting the waiver must be ''in the public interest.'' In this case, Congress clearly specified that the adequacy of the supply is judged in terms of the availability of the fuel or fuel additive to the ultimate consumer, and includes consideration of the ability to distribute the required fuel or fuel additive to the ultimate consumer. Although the RFS waiver provision does not contain any such explicit clarification from Congress, its broad and ambiguous wording provides EPA the discretion to reasonably interpret the scope of the RFS waiver provision as relating to supply of renewable fuel (in neat or blended form) to the ultimate consumer.

CAA section 211(m)(3)(C) allows EPA to delay the effective date of oxygenated gasoline requirements for certain carbon monoxide nonattainment areas if EPA finds ''an inadequate domestic supply of, or distribution capacity for, oxygenated gasoline. . . . or fuel additives'' needed to make oxygenated gasoline. Here, Congress chose to expressly differentiate between ''domestic supply'' and ''distribution capacity,'' indicating that each of these elements was to be considered separately. This would indicate that the term inadequate supply, although ambiguous for the reasons discussed above, could in appropriate circumstances be read as more limited in scope. In contrast to the RFS waiver provision, the section 211(m) waiver provision includes additional text that makes clear that EPA's authority includes consideration of distribution capacity—reducing the ambiguity inherent in using just the general phrase ''inadequate domestic supply.'' Presumably this avoids a situation where ambiguity would result in an overly narrow administrative interpretation. The oxygenated gasoline waiver provision is also instructive in that it clarifies that it applies separately to both finished oxygenated fuel and to oxygenated fuel blending components. That is, there could be an adequate supply of the oxygenate, such as ethanol, but not an adequate supply of the blended fuel which is sold to the consumer. The RFS waiver provision employs the phrase ''inadequate domestic supply'' without further specification or clarification, thus providing EPA the discretion to determine whether the adequacy of the supply of renewable fuel can reasonably be judged in terms of availability for use by the ultimate consumer, including consideration of the capacity to distribute the product to the ultimate consumer. In contrast to the section 211(m) waiver provision, Congress arguably did not mandate that the RFS waiver provision be interpreted as providing authority to address problems affecting the supply of renewable fuel to the ultimate consumer. However, given the ambiguity of the RFS provision, we believe that it does provide EPA the discretion to adopt such an interpretation, resulting in a policy approach consistent with that required by the less ambiguous section 211(m) waiver provision.[26]

[25] The reasons why we believe the statute should be interpreted in this way can be illustrated by examining the differences between the RFG opt-in situation and the RFS program. Limiting EPA's consideration to ''capacity to produce'' in the context of deferring RFG implementation in a state with serious air quality concerns is not likely to cause implementation problems because:

1. Infrastructure upgrades necessary to shift from use of conventional gasoline to RFG are relatively modest,;

2. The statute provides for up to one year between EPA's receipt of an opt-in request and the effective date of a rule requiring use of RFG, allowing time for the needed infrastructure upgrades; and

3. Opt-ins typically occur one state at a time, allowing available infrastructure expansion resources to be focused in a relatively small geographic area.

In contrast, allowing RFS waivers only where there is insufficient ''capacity to produce'' renewable fuel would be extremely problematic because:

1. The ethanol industry has the ability to produce far more ethanol than can currently be consumed in the U.S.;

2. Ethanol is already being supplied at E10 levels, and any further growth in ethanol use requires the time consuming installation of costly new E15 or E85 pumps and tanks;

3. The number of vehicles that can use higher ethanol bends is limited;

4. The statute envisions only one month between establishment of annual standards and the start of a compliance year, allowing limited time for infrastructure enhancements; and

5. The RFS is a nationwide program, and infrastructure improvements would be needed throughout the country at the same time to increase the nation's ability to consume renewable fuels at levels corresponding with production capacity.

[26] In CAA section 211(h)(5)(C)(ii), Congress authorized EPA to delay the effective date of certain changes to the federal requirements for Reid vapor pressure in summertime gasoline, if the changes would result in an ''insufficient supply of gasoline'' in the affected area. As with the RFS general waiver

As the above review of various waiver provisions in Title II of the Clean Air Act makes clear, Congress has used the terms ''supply'' and ''inadequate supply'' in different waiver provisions. In the RFS general waiver provision, Congress spoke in general terms and did not address the scope of activities or persons or places that are the focus in determining the adequacy of supply. In other cases, Congress provided, to varying degrees, more explicit direction. Overall, the various waiver provisions lend support to the view that it is permissible, where Congress has used just the ambiguous phrase ''inadequate domestic supply'' in the general waiver provision, to consider supply in terms of distribution and use by the ultimate consumer, and that the term ''inadequate supply'' of a fuel need not be read as referring to just the capacity to produce renewable fuel or the capacity to supply it to obligated parties and blenders.

We are aware that prior to final adoption of the Energy Independence and Security Act of 2007, Congress had before it bills that would have provided for an EPA waiver in situations where there was ''inadequate domestic supply or distribution capacity to meet the requirement.'' [27] EPA is not aware of any conference or committee reports, or other legislative history, explaining why Congress ultimately enacted the language in EISA in lieu of this alternative formulation. There is no discussion, for example, of whether Congress did or did not want EPA to consider distribution capacity, whether Congress believed the phrase ''inadequate domestic supply'' was sufficiently broad that a reference to distribution capacity would be unnecessary or superfluous, or whether Congress considered the alternative language as too limiting, since it might suggest that constraints other than ''distribution capacity'' on delivering renewable fuel to the ultimate consumer should not be considered for purposes of granting a waiver.[28] Given the lack of interpretive value typically given to a failure to adopt a legislative provision, and the lack of explanation in this case, we find the legislative history to be uninformative with regard to Congressional intent on this issue. It does not change the fact that the text adopted by Congress, whether viewed by itself or in the context of other fuel waiver provisions, is ambiguous.

We believe that it is permissible under the statute to interpret the term ''inadequate domestic supply'' to authorize EPA to consider the full range of constraints, including legal, fuel infrastructure and other constraints, that could result in an inadequate supply of renewable fuels to consumers. Under this interpretation, we would not limit ourselves to consideration of the capacity to produce or import renewable fuels but would also consider practical and legal constraints affecting the volume of qualifying renewable fuel supplied to the ultimate consumer.

We believe that our proposed interpretation is consistent with the language of section 211(o), and Congressional intent in enacting the program. It is evident from section 211(o) that Congress's intent was not simply to increase production of renewable fuel, but rather to provide that certain volumes of renewable fuel be used by the ultimate consumer as a replacement for the use of fossil based transportation fuel. The very definition of ''renewable fuel'' requires that the fuel be ''used to replace or reduce the quantity of fossil fuel present in a transportation fuel.'' CAA section 211(o)(1)(I); see also CAA 211(o)(1)(A) (definition of ''additional renewable fuel''). The RFS program does not achieve the desired benefits of the program unless renewable fuels are actually used to replace fossil based transportation fuels in the United States.[29] For example, the greenhouse gas reductions and energy security benefits that Congress sought to promote through this program are realized only through the use by consumers of renewable fuels that reduce or replace fossil fuels present in transportation fuel. Imposing RFS volume requirements on obligated parties without consideration of the ability of the obligated parties and other parties to deliver the renewable fuel to the ultimate consumers would achieve no such benefits and would fail to account for the complexities of the fuel system that delivers transportation fuel to consumers. We do not believe it would be appropriate to interpret the RFS general waiver provision in such a narrow way and limit EPA's consideration of the distribution and use of renewable fuels by the ultimate consumers of these fuels.

As described in more detail in Section II.A.5 below, although at least for 2014 and possibly 2015 and 2016, there is no shortage of ethanol and other types of renewable fuel that could be used to satisfy the statutory applicable volume of total renewable fuel, there are practical and legal constraints on the ability of ethanol to be delivered to and used as transportation fuel by vehicles. Legal requirements limit ethanol content of most gasoline to 10% (which is delivered as E10), but for subsets of vehicles allow up to either 15% ethanol (for 2001 and newer light-duty vehicles) or up to 85% ethanol (for flex fuel vehicles).[30] In addition there are marketplace and infrastructure constraints that limit the use of higher level (>10%) ethanol blends. These considerations prevent the fuel market from supplying vehicles the volumes of ethanol needed to meet the statutory level of total renewable fuel, and as such they create an inadequate domestic supply of renewable fuel that can actually be delivered to consumers and used as transportation fuel. EPA has evaluated this situation, and in this proposed rule is using the general waiver authority, together with our cellulosic waiver authority, to address this inadequate domestic supply situation.

We proposed the same interpretation of our general waiver authority in the November, 2013 NPRM for the 2014 RFS standards (which we are withdrawing in light of this re-proposal of 2014 standards) and we received many comments addressing our proposed interpretation. Although we are not generally responding to comments on the withdrawn 2014 RFS proposal, to aid the public in their evaluation of this proposal we discuss below the most common themes of comments received and our current assessment of them.

A number of stakeholders disagreed that a review of other CAA waiver authorities supports the conclusion that the term ''inadequate domestic supply'' is ambiguous, and that it can be interpreted to include consideration of infrastructure and other constraints related to the delivery and use of renewable fuel by vehicles. Most such stakeholders focused on section

provision, Congress did not specify what considerations would warrant a determination of insufficient supply. EPA has not been called upon to apply this provision to date and has not interpreted it.

[27] H.R. 6 and S. 606 as reported by Senate Envt. & Public Works in Senate Report 109–74.

[28] There are, for example, legal constraints on the amount of certain renewable fuels that may be blended into transportation fuels. These are discussed in Section II.D.1 for ethanol.

[29] For this reason, EPA's implementing regulations require that fuels with multiple possible end uses, such as biogas or electricity, are not considered to be renewable fuels absent a demonstration that they will be used by the ultimate consumers as transportation fuel. For instance, see 40 CFR 80.1426(f)(10)(i)(C) and (f)(10)(ii)(C). Similarly, our regulations require the retirement of RINs representing renewable fuel that is exported as they are not supplied as transportation fuel in the U.S.

[30] See, e.g., EPA partial waiver decisions at 75 FR 68094 (Nov. 4, 2010) and 76 FR 4662 (Jan. 26, 2011).

211(m)(3)(C)(i), which provides for a waiver of the requirement to use oxygenated gasoline in certain carbon monoxide nonattainment areas where there is ''an inadequate domestic supply of, or distribution capacity for, oxygenated gasoline.'' They argued that this provision demonstrates that infrastructure considerations are distinct from supply, and that Congress would have used similar language in section 211(o)(7)(A) if it intended EPA to consider infrastructure and other constraints as a basis for an RFS waiver. These stakeholders asserted that there can be no inadequate domestic supply if there is sufficient qualifying renewable fuel produced and available for purchase by obligated parties and, consequently, that any difficulty that obligated parties may experience in delivering renewable fuels to consumers is irrelevant under CAA section 211(o)(7)(A). However, EPA believes that these stakeholders' analysis has merit only when sections 211(m)(3)(C)(i) and 211(o)(7)(A) are viewed in isolation, and that their argument is not persuasive when all of the CAA provisions containing similar waiver provisions are considered. For example, as discussed above, in section 211(k)(6) Congress used the term ''capacity to produce'' in one RFG waiver context for opt-in states and ''capacity to supply'' in another context. This suggests that the term ''supply' does not unambiguously mean the same thing as ''produce,'' as these commenters argue. The term ''supply'' can mean something different, and logically does in the context of section 211(k)(6) where the two waiver provisions at issue use these different terms and apply in different contexts, to states with considerably different levels of air quality concern. The different ways that the term ''supply'' is used in the various CAA provisions indicates that in section 211(o)(7)(A), where the term is used in isolation, the word ''supply'' is ambiguous and may reasonably be interpreted consistent with the Act's objectives.

Some stakeholders have asserted that interpreting the general waiver authority to allow consideration of all constraints on the use of ethanol by the ultimate consumer would amount to focusing on ''demand'' rather than ''supply'' and would, therefore, be impermissible under the Act. EPA does not agree that a broad consideration of such factors as physical limitations in infrastructure (e.g., availability of E15 and E85 pumps), legal barriers to use of renewable fuel, or ability of vehicles to use renewable fuel at varying concentrations, represent consideration of 'demand' rather than ''supply.' These factors operate as practical and legal limits to how much renewable fuel can be distributed to and used by consumers, and therefore clearly relate to how much renewable fuel can be ''supplied'' to them. Although there may be some element of consumer preference reflected in the historic growth patterns of renewable fuel infrastructure and the current status of the infrastructure, it is nevertheless the case as of today that there are a limited number of fueling stations selling high-ethanol blends, and as a result, the number of stations operates as a constraint on how much ethanol can be delivered. Similarly, only flex fuel vehicles (FFVs) can legally use fuel with ethanol concentrations greater than 15 percent. The population of FFVs has grown considerably in recent years, but is still only a small fraction of the passenger vehicle fleet and there is an even smaller number of FFVs that have ready access to an E85 retail outlet. As a result, the number of FFVs with access to E85 also operates as a constraint on how much ethanol can be delivered. These constraints limit the supply of ethanol to vehicles in the 2014–2016 time period and, we believe, are appropriately considered in evaluating the need for an RFS waiver under section 211(o)(7)(A).

Some stakeholders have stated that even if the term ''inadequate domestic supply,'' were ambiguous, EPA's proposed interpretation is not reasonable because it would either reward obligated parties for their intransigence in planning to supply the volumes set forth in the statute, or because EPA's interpretation would effectively enshrine the status quo, and would prevent the growth in renewable fuel use that Congress sought to achieve in establishing the program. We agree that obligated parties have had years to plan for the E10 blendwall and that there clearly are steps that obligated parties could take to increase investments needed to increase renewable fuel use above current levels, as we have noted in prior actions.[31] We also note, however, that biofuel producers could also have taken appropriate measures, and that nothing precludes biofuel producers from independently marketing E85 or increasing the production of non-ethanol renewable fuels. EPA agrees that its approach to interpreting the term 'inadequate domestic supply' should be consistent with the objectives of the statute to grow renewable fuel use over time by placing appropriate pressure on all stakeholders to act within their powers to increase renewable fuel production and use, while also providing the relief to obligated parties that was intended through the statutory waiver authorities to address supply difficulties that cannot be remedied in the time period over which a waiver would apply. We believe that the approach we have proposed today provides an appropriate balance, and that the proposed applicable volumes are ambitious yet achievable, as described in Section II.D.

[31] See, for instance, 77 FR 70773 (November 27, 2012), column 1.

3. Assessment of Past Versus Future Supply

In the context of a forward-looking annual RFS standards rulemaking issued consistent with the statutory schedule, we propose that the evaluation of ''supply'' for purposes of determining whether ''inadequate domestic supply'' exists pursuant to section 211(o)(7)A)(ii), should involve an assessment of the maximum renewable fuel volumes that can reasonably be expected to be produced and consumed, and a comparison of those volumes to statutory volumes. This is the approach to the assessment of ''supply'' that we are proposing today for purposes of the 2016 RFS standards. However, the factual situation is different for 2014, since neither this proposed rule nor the final rule we expect to issue later in 2015 can influence the volumes of renewable fuel produced and consumed in the past. Accordingly, our assessment of the ''supply'' available for RFS compliance during 2014 must necessarily focus on the number of RINs generated in 2014 that are available for compliance with the applicable standards. To set the volume requirements at a higher level would require either noncompliance, which EPA deems an unreasonable approach, or the drawdown of the bank of carryover RINs. Although the availability of carryover RINs is a relevant consideration in determining the extent to which a waiver is justified, see Monroe 750 F.3d at 917, we believe that carryover RINs serve an important function under the program, including providing a means of compliance when natural disasters cause unexpected supply limitations, and that in the current circumstances EPA should not set the annual standards for 2014–2016 at levels that would clearly necessitate a reduction in the current bank of carryover RINs. See Section II.F for further discussion of our consideration of carryover RINs in this proposal.

For 2015, the situation is essentially a hybrid of the fact patterns for 2014

and 2016. A number of months have passed prior to issuance of this NPRM, and during those months this rulemaking could not influence renewable fuel use. Accordingly, this proposal accounts for actual renewable fuel use in the earlier part of 2015, and projects renewable fuel use only for future months. We are therefore proposing to use the same approach towards projecting renewable fuel growth in the latter part of 2015 as we are using for 2016.

4. Combining Authorities for Reductions in Total Renewable Fuel

EPA is today proposing reductions in the applicable volumes of advanced biofuel and total renewable fuel based on limitations in the availability of qualifying renewable fuels and factors that constrain supplying available volumes to the vehicles that can consume them. These two factors are both relevant forms of inadequate domestic supply, which authorize reductions under the general waiver authority and also justify reductions under the cellulosic waiver authority. We believe that reducing both total renewable and advanced biofuel are appropriate responses to these circumstances. We are proposing to use both the cellulosic biofuel waiver authority and the general waiver authority to reduce the statutory volumes for both advanced biofuel and total renewable fuel by 2.6 billion gallons in 2015 and 3.85 billion gallons in 2016. These two authorities are exercised individually, in a complementary fashion, and each justify our action. In addition, as the volume reduction required for total renewable fuel is greater than that needed for advanced biofuel, we are proposing to use the general waiver authority exclusively as the basis for further reducing the applicable volume of total renewable fuel by 1.6 billion gallons in 2015 and 1.0 billion gallons in 2016.

5. Inability of the Market To Reach Statutory Volumes

In order to use the general waiver authority in CAA 211(o)(7)(A) to reduce the applicable volumes of advanced biofuel and total renewable fuel, we must make a determination that there is either ''inadequate domestic supply'' or that implementation of the statutory volumes would severely harm the economy or environment of a State, a region or the United States. This section summarizes our proposed determination that there is an inadequate domestic supply of advanced biofuel and total renewable fuel in the time period 2014–2016, and thus that the statutory volume targets are not achievable.

As described in Section II.C.1 below, actual supply of renewable fuel in 2014 was 2.22 billion gallons below the applicable volume target in the statute (15.93 versus 18.15 billion gallons). Since the requirements we establish for 2014 cannot change what occurred in the past, our assessment of the ''supply'' available for RFS compliance during 2014 must necessarily focus on actual renewable fuel use, which we propose to be based on the volume of RINs actually generated in 2014 and available for use in complying with the applicable standards.[32] While we could also consider the availability of carryover RINs in assessing supply (as we did in the context of establishing the 2013 RFS annual standards), we have determined that in the current circumstances it would be imprudent and contrary to the long term objectives of the program to assess supply, and then set corresponding renewable fuel volume requirements, at levels that would necessitate a significant reduction in the current bank of carryover RINs. Further discussion of our evaluation of carryover RINs is presented in Section II.F.[33] Since we have determined that actual 2014 advanced biofuel and total renewable fuel use was less than the statutory applicable volume targets, we believe we are authorized to use the general waiver authority to address the ''inadequate domestic supply'' in 2014.

The statute sets targets of 20.5 billion gallons of renewable fuel in 2015 and 22.25 billion gallons of renewable fuel in 2016. We have determined that these volumes cannot be achieved under even the most optimistic assumptions given current circumstances. To make this determination, we first assumed that every gallon of gasoline would contain 10% ethanol, and also assumed production and use of BBD volumes at the highest historical level, which occurred in 2014. When these supplies of renewable fuel are taken into account, a significant additional volume of renewable fuel would still be needed for the statutory volume targets to be met.

TABLE II.A.5–1—ADDITIONAL VOLUMES NEEDED TO MEET STATUTORY TARGETS FOR TOTAL RENEWABLE FUEL

[Million ethanol-equivalent gallons]

	2015	2016
Statutory target for total renewable fuel	20,500	22,250
Maximum ethanol consumption as E10[a]	−13,780	−13,690
Historical maximum biomass-based diesel supply[b]	−2,500	−2,500
Additional volumes needed	4,220	6,060

[a] Derived from projected gasoline energy demand from EIA's Short-Term Energy Outlook (STEO) from May 2015.
[b] Represents the 1.63 billion gallons of biodiesel and renewable diesel supplied in 2014.

Based on the current and near-future capabilities of the industry, we expect that only a relatively small portion of the additional volumes needed would come from non-ethanol cellulosic biofuel, non-ethanol advanced biofuels other than BBD, and non-ethanol conventional renewable fuels. In total these sources could account for several hundred million gallons, as demonstrated by supply of these sources in 2013 and 2014.[34] The more likely sources of additional renewable fuel that could fulfill the need for 4.22 billion gallons in 2015 or 6.06 billion gallons in 2016 are BBD in addition to the 1.63 billion gallons supplied in 2014, or ethanol consumed as higher ethanol blends such as E15 and E85. In either case, more than 70% of those additional ethanol-equivalent volumes

[32] RINs available for use in complying with the standards represent ethanol-equivalent gallons actually used. Some RINs generated in 2014 may not be available for compliance purposes if they are retired for exports, spills, invalidity, or similar circumstances.

[33] Although we do not believe that carryover RINs should be relied on to set a higher volume requirement for 2014 than is reflected by actual 2014 renewable fuel use, we note that even if the entire estimated bank of 1.8 billion carryover RINs were used for 2014 compliance, a waiver from statutory applicable volumes would still be required for 2014.

[34] Non-ethanol supply other than BBD was 238 mill gal in 2013 and 175 mill gal in 2014. Details of actual supply in 2013 and 2014 can be found in the docket.

would need to be advanced biofuel in order to meet the statutory volume requirement for advanced biofuel.[35]

If all of the additional volumes needed were biodiesel, the industry would need to supply a total of about 4.5 billion gallons in 2015 and 5.7 billion physical gallons in 2016. There currently exists only about 2.8 billion gallons of registered biodiesel production capacity in the U.S., though total production capacity considering unregistered facilities may be as high as 3.6 billion gallons. In addition to expanding the registered production capacity, the industry would need to restart all idled facilities, secure sufficient feedstocks including diverting them from current uses, implement significantly expanded distribution, blending, and retail sales infrastructure, and establish new contracts for distribution and sales. Based on current market circumstances, including the biodiesel sector's current production capacity and broader infrastructure limitations, we do not believe that an expansion in production and use of this magnitude is possible in 2015 or 2016. Just as importantly, volumes on the order of 4.5 billion gallons in 2015 and 5.7 billion physical gallons in 2016 are far in excess of what could actually be consumed in this short timeframe. This volume of BBD would constitute about 8% of the diesel pool in 2015 and 10% in 2016.[36] Although most medium and heavy-duty engine manufacturers warrant the use of blends up to B20 in their more recent models, some light-duty engine manufacturers do not, and the majority of highway and nonroad diesel engines in use today are warranted for no more than 5% biodiesel. Also, biodiesel concentrations in the winter months are sometimes kept to lower levels by engine owners due to cold weather operability and storage concerns. The National Biodiesel Board has extensive efforts underway working with the vehicle and engine manufacturers to continue to expand product offerings capable of operating on B20, working with their membership to improve fuel quality, expanding infrastructure to address cold temperature issues, and working with dealers and technicians to clear away obstacles standing in the way of expanding biodiesel acceptance in the marketplace.[37] There are also efforts to increase the use of biodiesel in heating oil. These will continue to bear fruit, allowing the biodiesel volume to continue to rise over time, but not to the levels that would be needed in 2015 and 2016 if the additional volumes shown in Table II.A.5–1 were met with biodiesel.

Alternatively, if all of the additional volumes were ethanol, the U.S. would need to consume volumes of E85 far higher, in our estimation, than the market is capable of supplying: in 2015 the required volume of E85 would need to be about 6.4 billion gallons, while in 2016 it would need to be about 9.2 billion gallons.[38] [39] These volumes are 30–50 times higher than actual E85 consumption in 2014, and would require many of those FFVs that do not have an E85 retail outlet anywhere close by to use it.[40] Moreover, a majority of this additional ethanol would need to be advanced, and currently the only substantial source of advanced ethanol is imported sugarcane ethanol from Brazil which has recently increased its own ethanol use requirements. In order to meet the statutory volume requirement for advanced biofuel, the U.S. would need to import at least 3.0 billion gallons in 2015 and 4.7 billion gallons in 2016.[41] Such volumes would be on the order of ten times higher than actual annual imports in the past. The highest volume of Brazilian sugarcane ethanol that has ever been imported was 680 million gallons in 2006, and in recent years ethanol imports have been considerably lower.[42] In 2014, imports were only 64 million gallons.[43] While production of sugarcane ethanol in Brazil has increased, demand for ethanol in Brazil has also increased. For instance, Brazil recently increased the required ethanol content of gasoline from 25% to 27.5%.[44] As a result, we believe that exports of 3.0—4.7 billion gallons from Brazil to the U.S. in the 2015—2016 timeframe are infeasible.

The additional volume of 4.22 billion gallons in 2015 or 6.06 billion gallons in 2016 could also be satisfied through production and use of a combination of BBD and E85. However, even in this case the volumes are untenable. Figure II.A.5–1 shows the range of possibilities for both 2015 and 2016.

[35] Assumes that all ethanol consumed as E10 in Table II.A.5–1 is conventional (non-advanced).

[36] Based on EIA's May 2015 Short-Term Energy Outlook (online interactive table), nationwide diesel consumption is projected to be 57.5 bill gal in 2015 and 58.9 bill gal in 2016.

[37] ''NBB Technical Update for EPA, April 30, 2015'' in docket EPA–HQ–OAR–2015–0111.

[38] In general when discussing efforts to increase the use of ethanol beyond the blendwall we focus on the volume of E85 that is consumed, since volumes of E15 are likely to be small in 2016. See additional discussion of this issue in Section II.D.1 below.

[39] Due to relative ethanol content and the fact that E85 displaces some E10, each gallon of ethanol above the E10 blendwall requires the use of 1.51 gallons of E85.

[40] Further discussion of the E10 blendwall can be found in Section II.D.1.

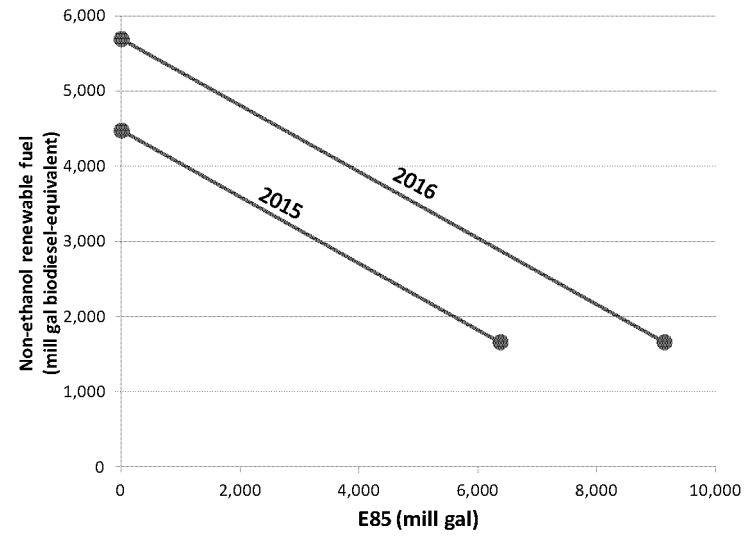
[41] The balance of the additional volumes needed, as shown in Table II.A.5–1, would most likely be corn-ethanol.

[42] 42 Ethanol import data from EIA, representing imports directly from Brazil and indirectly through the Caribbean Basin Initiative (CBI) and the Central America Free Trade Agreement (CAFTA). *http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_epooxe_im0_mbbl_m.htm.*

[43] Based on import data from EMTS.

[44] ''Brazil Hikes Ethanol Blend in Gasoline to 27%,'' DownstreamBusiness.com, March 12, 2015.

Figure II.A.5-1
Volumes of Biodiesel Versus E85 That Must Be Supplied
In Order to Meet Statutory Volume Targets



We recognize that the market could potentially reach higher total volumes than those reached in 2014 by using a combination of biodiesel and E85. Even so, we believe that the market could not reach the volumes specified in the statute. For instance, one possible combination for 2016 would be 4.5 billion gallons of E85 and 3.7 billion gallons of biodiesel. While both of these volumes are considerably less than the maximums that would be required if the market supplied only one or the other, nevertheless both levels appear to be beyond the reach of the market under current circumstances. Based on this assessment, we do not believe that the statutory volumes for advanced biofuel and total renewable fuel can be met in 2015 or 2016.

B. Overview of Approach to Determining Volume Requirements

Although the statute does not require that EPA issue a waiver of the statutory applicable volumes when EPA determines that there is an inadequate domestic supply of renewable fuel, we are in fact proposing to do so.[45] However, we are proposing to exercise that authority only to the extent necessary to remove the inadequacy in supply. That is, our objective in exercising the general waiver authority is to set the volume requirements at the boundary between an adequate domestic supply and an ''inadequate domestic supply.''[46] One way of expressing this objective is to say we are seeking to determine the maximum volumes of renewable fuel that are achievable in light of supply constraints. This is a very challenging task not only in light of the myriad complexities of the fuels market and how individual aspects of the industry might change in the future, but also the fact that we cannot precisely predict how the market will respond to the volume-driving provisions of the RFS program. Thus the determination of the maximum achievable volumes is one that we believe necessarily involves considerable exercise of judgment. To this end, we are proposing ''maximum achievable'' volumes of advanced biofuel and total renewable fuel in this package that reflect our judgment as to where the intersection between adequate domestic supply and inadequate domestic supply might fall. There are a number of indications, described below, that the volumes we are proposing today represent a reasonable estimate of the maximum volumes achievable.

In the November 2013 NPRM we projected achievable volumes by following an approach wherein we first projected future volumes for each of the various components of the renewable fuel pool and then combined them using a statistical approach to arrive at overall totals. By considering each possible source of renewable fuel in isolation, we had intended to reduce the generation of the proposed standards to a collection of more easily estimated components. We acknowledged that each source of renewable fuel was not independent from other sources under the influence of the RFS program, but we nevertheless treated them as such. However, because the projected volume of each individual source was uncertain, there needed to be flexibility in the proposed volume requirements so that excesses of one source could compensate for potential shortfalls in another source. To account for this fact, and also for the fact that the uncertainty associated with each individual source was compounded when those sources were added together, we targeted the mean of the projected range of potentially achievable volumes rather than some higher value as the basis for the proposed volume requirements.

After further consideration, we believe that the approach we took in the November 2013 NPRM underestimated achievable volumes and did not fully account for the potential of the market to respond to the standards that we set. We have determined that considering each potential source of renewable fuel in isolation, adding those sources together, and then using the mean of the resulting range was more suited to taking a neutral aim at accuracy of supply, rather than estimating the maximum volumes that can be achieved from a responsive market as implicitly required by the statute. The applicable

[45] 211(o)(7)(A) says, ''The Administrator . . . may waive the requirements . . .'' [emphasis added]

[46] As discussed in Section II.A, EPA has considerable discretion in exercising the cellulosic waiver authority, and is not constrained to consider any particular factor or list of factors in doing so. Nevertheless, EPA is proposing to base its exercise of the cellulosic waiver authority on the same general considerations justifying its use of the general waiver authority—availability of renewable fuel and the legal and practical constraints on their supply to vehicles and other qualifying uses. We invite comment on this approach.

volumes established by Congress in the statute were very ambitious, and even in cases where we have determined that the statutory volumes cannot be met we are under an obligation to set volume requirements that are achievable but still ambitious. Therefore, for this proposal we have found it more straightforward and more in keeping with the statute's goals to estimate the total maximum achievable volumes for both advanced biofuel and total renewable fuel based on the market potential for overcoming the various constraints at play. In this process was have considered the contributions from individual sources of renewable fuel, including E15 and E85, in the aggregate rather than individually, and in the context of a market that is responsive to the standards that we set.

Section II.A above lays out the rationale and justification for exercising our waiver authority under the Clean Air Act's relevant provisions. In determining the specific volumes to propose, we have considered not only the current circumstances and limitations in the ability to supply renewable fuels to the consumer, but also historic renewable fuel growth patterns and maximum supplies, the intent of Congress to use the RFS program to drive growth in renewable fuel use, and our assessment (based on years of regulating the fuel production and distribution industry) of the ability of the RFS program to effect changes that will result in growth. As a result, our proposed approach envisions growth in supply beyond historical levels as envisioned by the statute. This section provides an overview of our approach to determining the proposed volume requirements.

1. Fulfilling Congressional Intent To Increase Use of Renewable Fuels

Although there is scant legislative history for the Energy Independence and Security Act (EISA) to confirm the facts that were considered by Congress at the time of enactment, we believe that when Congress specified the renewable fuel volume targets that the RFS program was to attain, that it likely was with the understanding that the growth reflected in the statutory tables of applicable volumes would be beyond any previously demonstrated ability of the industry to produce, distribute, and consume renewable fuels. For example, the annual average growth reflected in the statutory volumes for the time period between 2009 and 2022 is 1.6 billion gallons per year for advanced biofuel and 1.9 billion gallons per year for total renewable fuel. However, in the period 2001 to 2007 leading up to enactment of EISA, annual average growth rates were lower: 0.8 billion gallons per year for ethanol, which was not advanced biofuel, and 0.07 billion gallons per year for biodiesel. The supply of other renewable fuels during this timeframe was essentially zero. In other words, Congress set targets that envisioned growth at a pace that far exceeded historical growth and prioritized that growth as occurring principally in advanced biofuels (contrary to historical growth patterns). It is apparent, therefore, that Congress intended to require changes that would be unlikely to occur absent the new program.

Moreover, it is highly unlikely that Congress expected the very high volumes that it specified in the statute to be reached only through the consumption of E10; indeed the statute does not explicitly require the use of ethanol at all. At the time EISA was passed in 2007, EIA's Annual Energy Outlook for 2007 projected that 17.3 billion gallons of ethanol is the maximum that could be consumed in 2022 if all gasoline contained E10 and there was no E0, E15, or E85.[47] However, 17.3 billion gallons is far less than the 35 billion gallons of renewable fuel other than BBD that Congress targeted for use in 2022. Thus, if the statutory targets were to be achieved, 17.7 billion gallons of renewable fuel would need to be consumed in 2022 either as higher level ethanol blends (E11—E85), or as non-ethanol fuels. Such levels were far beyond the industry's abilities at the time of EISA's enactment, strongly suggesting that Congress expected the RFS program to compel the industry to make dramatic changes in a relatively short period of time.

Congress did not explicitly indicate, in EISA or in any other document associated with it, the sort of changes that may have been expected to occur to reach 36 billion gallons by 2022. Instead, there was an implicit assumption that the market would respond appropriately to overcome those obstacles to significant growth that might exist. Today we know that the changes needed to significantly expand renewable fuel use fall into a select number of areas, including:

- Increased production and/or importation of ethanol, primarily advanced ethanol
- Increased use of E15 in model year 2001 and later vehicles
- Increased use of E85 or other higher level ethanol blends in flex-fuel vehicles (FFVs)
- Increased production and/or importation of non-ethanol biofuels (e.g., biodiesel, renewable diesel, renewable gasoline, and butanol) for use in conventional vehicles and engines
- Increased use of biogas in CNG vehicles
- Increased use of renewable jet fuel and heating oil
- Increased use of non-food based feedstocks
- Co-development of new technology vehicles and engines optimized for new fuels

In the near term we expect that increases in E85 and biodiesel will dominate efforts to increase the use of renewable fuel, with smaller roles played by other avenues (e.g., increased E15 use). In the longer term, sustained ambitious volume requirements are necessary to provide the certainty of a guaranteed future market that is needed by investors; the development of new technology won't occur unless there is clear profit potential, and it requires multiple years to build new production, distribution, and consumption capacity. We believe that the approach we take to setting the standards must be consistent with Congress' clear goal of compelling the industry to make dramatic changes to increase renewable fuel use. To this end, the approach presented in this action makes use of the statutory waiver authorities only to the degree necessary to ensure that the resulting volumes of advanced biofuel and total renewable fuel are within reach of the market.

We believe that over time use of both higher level ethanol blends and non-ethanol biofuels can and will increase, consistent with Congress' intent in enacting EPAct and EISA. As stated above, while Congress provided waiver authority to account for supply challenges, we do not believe that Congress intended the renewable fuels market to be ultimately constrained by the E10 blendwall or any other particular limitation that may exist in supplying renewable fuels. The fact that Congress set volume targets reflecting increasing and substantial amounts of renewable fuel use clearly signals that it intended the RFS program to create incentives to increase renewable fuel supplies and overcome supply limitations. Notwithstanding these facts,

[47] Assumes that AEO2007's 2022 demand for gasoline energy was fulfilled entirely by E10. AEO2007 however, projected that considerably less gasoline used in 2022 would be E10. We have converted the projected 2022 gasoline energy demand into an equivalent volume of E10 to determine the maximum volume of ethanol that could have been consumed in 2022, based on the AEO2007, if all gasoline was E10.

Congress also authorized EPA to adjust statutory volumes as necessary to reflect situations where only partial progress had been made towards eliminating supply limitations, as well as to address situations involving unexpected severe economic or environmental harm resulting from program implementation.

2. RFS Program Mechanisms and Their Role in Supporting Growth in Renewable Fuel Use

Congress charged EPA with implementing a program whose explicit goal is increased renewable fuel use over time, and EPA, in developing an implementation framework, sought to achieve this goal in a fashion that maximizes flexibility and the power of the marketplace, while at the same time recognizing the complex and disaggregated structure of the fuel production and distribution systems. EPA created a system whereby renewable fuel producers generate RINs for each gallon of renewable fuel produced. These RINs, under certain conditions, can be separated from the renewable fuel and bought and sold by registered parties. They are ultimately used by obligated parties as a means of demonstrating compliance with their renewable volume obligations. In establishing a compliance approach based on RINs, EPA sought to encourage efficient, market-based solutions to the challenges associated with increasing the production, distribution, and consumption of renewable fuels.

The RIN system is the mechanism established by EPA for obligated parties to demonstrate compliance with the standards, and is designed to provide obligated parties flexibility in the means they use to demonstrate compliance. The RFS program, acting through the mechanism of the RIN system, operates to provide an incentive for renewable fuel producers to increase the production of renewable fuels by, in effect, increasing the price blenders and obligated parties are willing to pay for renewable fuels. Under the RFS program, renewable fuel producers sell not only the fuels they produce, such as ethanol or biodiesel, but also the RINs that are ''assigned'' to the renewable fuel. As the demand for RINs increases, the willingness of the market to pay for renewable fuels and the RINs assigned to them also increases. When working efficiently, this system allows renewable fuel producers to continue to profitably market renewable fuel at times that would otherwise result in negative margins, such as when the price of feedstock or other inputs are unusually high, the price of the petroleum fuels that renewable fuels replace is unusually low, or when market demand for renewable fuel is low. In this way the RFS program, through the RIN system, also assists renewable fuel producers seeking to finance the construction of new facilities, especially facilities capable of producing cellulosic or advanced biofuels, by providing certainty that there will be a market for increasing volumes of renewable fuels.

The RIN system should also incentivize the development of the renewable fuel distribution infrastructure by helping to decrease the net cost of renewable fuels. As mentioned, when fuel blenders or obligated parties purchase renewable fuel directly from renewable fuel producers this fuel generally comes with an assigned RIN. When a fuel blender blends the renewable fuel with petroleum-based fuel to create finished transportation fuel, the blender is able to separate and sell the RIN that was previously assigned to the renewable fuel. Whatever price the fuel blender or obligated party receives for the RIN can be thought of as reducing the net purchase price of the renewable fuel. For example, if a fuel blender purchases a gallon of ethanol with an attached RIN for $1.50 and, after blending the ethanol to create transportation fuel, sells the RIN for $0.50, the blender has effectively paid $1.00 for the gallon of ethanol without the RIN. The higher the price received for the RIN, the lower the effective cost of the renewable fuel. Higher RIN prices therefore enable fuel blenders to market finished fuels that contain renewable fuel components at lower prices by allowing them to purchase renewable fuels for a lower effective price. A fuel blender can choose not to reduce the price of the blended fuel and keep the value associated with the RIN as profit, or they can attempt to increase their market share by passing along the lower effective purchase price of the renewable fuel to the customers in the price of their fuel blends.[48] By increasing the potential profitability of blending renewable fuels, higher RIN prices can incentivize the build out of the infrastructure necessary to blend and distribute renewable fuel blends as parties seek to enter or expand their position within this market.[49]

Finally, the RFS program, operating through the RIN system should increase the consumption of renewable fuels by ultimately decreasing the cost of renewable fuel blends to consumers relative to the cost of fuel blends that do not contain renewable fuels. RIN prices can be used by blenders to decrease the effective cost of renewable fuel used to create transportation fuel. As more market participants enter the renewable fuel blending and distribution marketplace, and consumers learn to accurately compare the cost of E10 and other higher-level ethanol blends, over some period of time the competition among renewable fuel blenders and distributors should result in a greater portion of the reduced effective cost of renewable fuel blends enabled by the sale of the RIN to be passed on to fuel consumers. Transportation fuel that contains renewable fuels should then reflect these cost reductions relative to transportation fuel containing lower volumes of renewable fuel (or no renewable fuel) in proportion to their renewable fuel content; transportation fuel containing a greater percentage of renewable fuels should be priced lower than transportation fuel containing a lesser percentage of renewable fuel. Motivated by the lower fuel prices for transportation fuel containing greater renewable fuel content (such as E85) relative to fuels containing less renewable fuel (such as E10), consumers will then choose to purchase increasing volumes of renewable fuel. If the price discount for renewable fuels is great enough for a long enough period of time, they may also be motivated to purchase vehicles capable of utilizing fuels containing higher percentages of renewable fuels, such as flexible fuel vehicles.

While economic theory and the illustration in the preceding paragraphs support the idea that RINs can serve as a mechanism to increase the production, distribution, and consumption of renewable fuels, it is important to note that this is dependent on the marketplace working efficiently. In reality, there is a timing component associated with each of the steps outlined above. Renewable fuel producers and investors must see a sustained, profitable market for renewable fuels before they will be willing to invest in the construction of additional fuel production capacity,

[48] In competitive markets, such as the market for E10, fuel blenders must reflect the lower effective prices of renewable fuel (ethanol) in the price of the E10. For emerging markets, such as E85, there may be greater opportunities for fuel blenders to withhold profit due to a lack of market competition until such a time as other parties enter the E85 market.

[49] Although not directly relevant to the establishment of the proposed standards, for further background information on EPA's understanding of the RIN and renewable fuel market dynamics see ''A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects,'' Dallas Burkholder, Office of Transportation and Air Quality, US EPA. May 14, 2015, EPA Air Docket EPA–HQ–OAR–2015–0111.

which may take years to construct and bring online. Fuel blenders and distributors must see sustained profit opportunities before they are willing to invest in new infrastructure to increase their capacity to blend and distribute renewable fuels. Market competition must increase before fuel blenders and distributors are willing to pass along the reduced effective price of renewable fuel to consumers. New fueling infrastructure may need to be built to facilitate the sales of fuels containing an increasing percentage of renewable fuel. Consumers will need to learn to be able to identify value in fuel blends containing higher proportions of renewable fuels, as well as their vehicle's ability to handle these fuel blends and where they are available for purchase.

This suggests that while the RFS program established by EPA can be effective at increasing the renewable content of transportation fuels over time, it likely cannot substantially increase the available supply of renewable fuels to consumers to the volumes envisioned by Congress in the short term. The program, as Congress clearly indicated, is intended to grow over a period of years. EPA remains committed to promoting renewable fuel production and use in the United States, and we believe the RFS program will be effective in achieving this end. Due to the current state of the renewable fuel production, distribution, and consumption marketplace, we believe the required volumes of renewable fuel must be reduced below the statutory levels in the immediate near term. An approach that provides volume targets that balances aggressive growth with marketplace realities is necessary, is consistent with the statute and Congressional intent, and is the intended outcome of this proposed action.

3. Current and Future Shortfalls in Supply

In 2013 and 2014, the market supplied less renewable fuel to the domestic transportation sector than the statutory targets for those years. While the standards for 2013 were not finalized until August 15, 2013 and the standards for 2014 have not yet been finalized, we do not believe that these delays are the only reasons that actual supply fell short of the statutory volumes. Shortfalls in production and import capability of non-ethanol renewable fuels and constraints on the supply of ethanol to vehicles were also significant factors in not meeting the statutory volume targets, and we expect these factors to continue in 2015 and beyond.

Supplies of BBD and advanced biofuel in 2013 exceeded the statutory requirements for these two categories of renewable fuel by a wide margin. In addition, there was a record high of about 250 million ethanol-equivalent gallons of non-advanced biodiesel and renewable diesel imported in 2013. However, supply of total renewable fuel fell far short of the statutory target of 16.55 billion gallons, reaching only 15.54 billion gallons. The most likely source of additional renewable fuel that could have made it possible to reach a total of 16.55 billion gallons was corn-ethanol. Consuming an additional 1 billion gallons of ethanol would have required consumption of E85 to increase to more than 1.5 billion gallons.[50] The fact that the market only achieved about 130 million gallons of E85 in 2013 despite substantial increases in the production and import of non-ethanol blends and the substantial draw-down in the bank of carryover RINs indicates that E85 consumption was constrained.[51] We believe these constraints included those related to infrastructure (e.g., availability of E85 at retail and the number of FFVs in the fleet) and poor pricing of E85 relative to E10 that fails to overcome the lower energy content of E85 and any inclinations that FFV owners may have to opt to use gasoline.[52]

A similar situation existed in 2014, except that both the advanced biofuel and total renewable fuel volumes supplied fell short of the statutory volume targets. We recognize that the market may have been influenced by the proposed volume requirements for 2014 specified in the November 2013 Notice of Proposed Rulemaking (NPRM) which included proposed reductions from the statutory levels.[53] However, there are reasons to believe that the November 2013 NPRM was not the only factor resulting in actual supply falling short of the statutory volumes. Not only did we request comment on volume requirements higher than those we proposed, but there was an inherent possibility that we might finalize the statutory volumes for 2014. Indeed, we received over 340,000 comments on the November 2013 NPRM, many of which requested that we set the 2014 volume requirements at the statutory levels. We believe that obligated parties would likely act prudently to minimize the risk that they would be out of compliance regardless of the outcome in the final rule. The fact that total demand for gasoline was about the same in 2014 as it was in 2013 suggests that the E10 blendwall also played a role in limiting the supply of renewable fuel. Thus the facts suggest that factors other than the NPRM were principally responsible for renewable fuel use being considerably below the statutory volume levels. In particular, we believe these factors include insufficient production and import of non-ethanol renewable fuels, and constraints on the supply of ethanol to vehicles that can consume it.

Our view that factors other than the November 2013 NPRM were responsible for renewable fuel use being considerably below the statutory volume levels in 2014 is also supported by the fact that the supply of advanced biofuel was insufficient to fill the gap created by the shortfall in cellulosic biofuel. Under the statute, cellulosic biofuel was intended to fill 1.75 billion gallons out of the 3.75 billion gallons advanced biofuel applicable volume target. In reality, cellulosic biofuel was only 0.03 billion gallons. The market did increase the supply of other advanced biofuel, but those increases were insufficient to reach the statutory volume target. Specifically, the market supplied 1.63 billion gallons (2.5 billion ethanol-equivalent gallons) of BBD but only 143 million gallons of other advanced biofuel. We expect the gap created by the shortfall in cellulosic biofuel to widen further in 2015 and 2016 as the statutory volume targets quickly increase but the supply potential of the market increases at a slower rate.

Supply of ethanol in higher level ethanol blends, primarily E15 and E85, also fell far short of what would have been needed to reach the statutory volumes of total renewable fuel in 2014. While the total volume of ethanol that could in theory have been consumed in 2014 in the form of E15 and E85 was about 26 billion gallons [54] based on the

[50] E85 is assumed to contain 74% ethanol, consistent with the concentration assumed by EIA. Each gallon of E85 displaces some E10. The net result of these two factors is that every gallon of ethanol that must be consumed above the E10 blendwall requires 1.51 gallons of E85.

[51] Because the applicable volume requirement for total renewable fuel in 2013 was 16.55 bill gal, but actual supply was only 15.54 bill gal, there was a shortfall of about 1 bill RINs needed for compliance.

[52] For a further discussion of the ability of the RFS program, acting through the RIN system, to impact E85 infrastructure and pricing as well as the limitations of the RFS program see Section II.B.2.

[53] 78 FR 71732, November 29, 2013.

[54] 26 bill gal estimate assumes that FFVs in the fleet in 2014 had a cumulative consumption capacity of about 13 billion gallons of E85, that E85 would average 74% ethanol, and that model year 2001 and later conventional vehicles had a cumulative consumption capacity of about 110

consumption capacity of vehicles that are legally permitted to use these fuels, constraints such as those imposed by blending and dispensing infrastructure and poor pricing relative to E10 resulted in only about 100—200 million gallons of ethanol actually being consumed as E15 and E85 in 2014.[55] Use of E15 in 2014 was limited by the very small number of stations choosing to market it, which numbered less than 100 by the end of 2014 out of a total of more than 150,000 stations nationwide. Similarly, the number of retail stations offering E85 was about 3,000 by the end of 2014, representing only about 2% of stations nationwide.[56] There were about 14 million FFVs in the fleet in 2014, representing about 6% of all light-duty cars and trucks. However, with only about 2% of retail stations offering E85, only a minority of those FFVs had an E85 refueling station nearby. The relative pricing of E15 and E85 compared to E10 at the retail level also likely played a role in sales of these higher level ethanol blends falling far below the available consumption capacity; while some retailers passed savings associated with high ethanol RIN value along to consumers, increasing demand for higher level ethanol blends, this was not typical across the nationwide market.[57]

Since 2013, the number of FFVs in the fleet and the number of retail stations offering E15 and E85 have grown, and we believe that this growth has been influenced in part by the RFS program. However, this growth has been very modest. Similarly, growth in the ability of the market to supply advanced biofuel other than cellulosic biofuel and BBD has also been modest. Current indications are that growth in all of these areas will continue, and the capability exists for growth to accelerate. However, growth is very unlikely to reach a level that would enable the statutory volume targets to be met in the near term. As a result, we believe that there will continue to be constraints on the total volume of renewable fuel that can be consumed in 2015 and 2016.

C. Proposed Volume Requirements

The purpose of the RFS program is to ensure that renewable fuels are increasingly used to replace or reduce the use of fossil-fuel based transportation fuel. Ethanol is currently the most widely used renewable fuel for this purpose, with biodiesel being the second most common renewable fuel and other fuels making up a significantly smaller portion of the pool. For non-ethanol renewable fuels, the primary supply constraint at present is the projected shortfall in domestic production or importation of qualifying volumes. For ethanol blends, there are both legal and practical constraints on the amount of ethanol that can be supplied to the vehicles that can use it, notwithstanding the considerable volumes that can be produced and/or imported. Gasoline-powered vehicles and engines have for many years been designed and warranted to use gasoline with ethanol up to 10%, and only blends up to 10% ethanol have historically been legal for use. There are, however, two other avenues through which gasoline with higher concentrations of ethanol can be used. In 2010 and 2011, EPA granted partial waivers that together allow 2001 and later model year light-duty motor vehicles to use gasoline containing up to 15% ethanol.[58] While such fuels are legal, retail service stations have been slow to offer them. In addition, manufacturers have been increasingly warranting their new vehicles to operate on E15 and have for some time also been designing and marketing FFVs capable of operating on denatured ethanol concentrations as high as 85%. These vehicles represent about 7% of the in-use fleet in 2015. However, like the use of E15 in 2001 and later model year vehicles, use of E85 in FFVs has been limited in part by the relatively small number of retail stations offering it.

While there are constraints on expansion of renewable fuel use, markets have a demonstrated ability to overcome constraints with the appropriate policy drivers in place, as discussed in Section II.B.2 above. We believe that the RFS program can drive renewable fuel use, and that it is appropriate to consider the potential of the market to respond to the standards we set when we assess the amount of renewable fuel consumption that can be achieved. Thus, we are proposing volume requirements for advanced biofuel and total renewable fuel that take into account both the constraints on supply and the ability of the RFS program to drive consumption.

1. 2014

Since 2014 has passed, we are proposing to base the applicable volume requirements for that year on the number of RINs supplied in 2014 that are expected to be available for use in complying with the standards. These RINs would include those that were generated for renewable fuel produced or imported in 2014 as recorded in the EPA-Moderated Transaction System (EMTS), minus any RINs that have already been retired for non-compliance reasons or would be expected to be retired to cover exports of renewable fuels.[59] RINs that have already been retired for non-compliance purposes include those retired to correct for invalidly generated RINs, volumes for renewable fuel that was spilled after RIN generation, etc. These RINs are recorded in EMTS on an ongoing basis. However, the total number of RINs that would be expected to be retired to cover exports of renewable fuel in 2014 will only be recorded in EMTS after the compliance demonstration deadline for 2014 has passed. Since the compliance deadline for all 2014 RIN exports has not yet passed, we are proposing to estimate likely RIN retirements for renewable exports using renewable fuel export information from EIA.[60] If RINs retired for exports are recorded in EMTS prior to issuance of the final rule, we will use EMTS data instead of EIA data in determining supply for 2014 in the final rule.

Actual supply in 2014 is shown in Table II.C.1–1 below. Further details are provided in a memorandum to the docket.[61] Since EIA does not distinguish exports by D code, we assumed based on past practice that all ethanol exports represent D6 ethanol, and all biodiesel exports represent D4 BBD. We expect

billion gallons of E15 which would contain 15% ethanol.

[55] Low actual consumption compared to consumption capacity may also be a function of vehicle warranties which do not explicitly permit the use of E15.

[56] Source: DOE's Alternative Fuels Data Center.

[57] The largest nationwide average discount for E85 relative to gasoline reported in the Department of Energy's quarterly Clean Cities Alternative Fuel Price Report in 2014 was 13.8% (October 2014; the average gasoline price was $3.34 per gallon and the average E85 price was $2.88 per gallon). The Energy Information Administration estimates that E85 contains 74% ethanol on average, requiring a discount of approximately 22% per gallon for E85 relative to gasoline for E85 to priced equal to gasoline on a dollar per BTU basis. Price discounts for E85 relative to gasoline were higher or lower for individual regions, states, and stations.

[58] 75 FR 68,094 (Nov. 4, 2010) (First E15 Partial Waiver Decision); 76 FR 4662 (Jan. 26, 2011) (Second E15 Partial Waiver Decision).

[59] Although we estimate that there are approximately 1.8 billion carryover RINs available, we are proposing not to count those RINs as part of the ''supply'' for 2014 or later years, for the reasons described in Section II.F.

[60] *http://www.eia.gov/dnav/pet/pet_move_expc_a_EPOORDB_EEX_mbbl_m.htm.*

[61] ''Summary of data on 2014 RIN Generation and Consumption,'' memorandum from David Korotney to EPA docket EPA–HQ–OAR–2015–0111.

that any errors introduced by this assumption will be very small.

TABLE II.C.1–1—2014 ACTUAL SUPPLY

[Million RINs]

D code	Domestic production	Imports	Exports	Net supply [a]
3 & 7	33	0	0	33
4	2,131	496	124	2,502
5	79	64	0	143
6	13,759	336	846	13,250
All advanced biofuel (D3+D4+D5+D7)	2,243	560	124	2,679
All Renewable fuel (D3+D4+D5+D6+D7)	16,002	896	970	15,929

[a] Totals may not add up due to rounding.

Based on these volumes, we are proposing the applicable volume requirements for advanced biofuel and total renewable fuel for 2014, as shown in Table II.C.1–2 below. Discussion of the proposed cellulosic biofuel and BBD volume requirements for 2014 can be found in Sections IV.C and III.C, respectively.

TABLE II.C.1–2—PROPOSED VOLUME REQUIREMENTS FOR 2014

[Billion gallons]

Advanced biofuel	2.68
Renewable fuel	15.93

2. 2015

Despite the fact that this proposal is being released well into 2015, we believe that the market can achieve growth this year in comparison to the volumes that were supplied in 2014 (though the rate of growth will not be as high as compared to a scenario under which the market is given the full lead time envisioned by the statute). To this end, we are proposing that the volume requirement for advanced biofuel in 2015 be 2.90 billion gallons. The market has already demonstrated that this level is achievable, having reached 2.92 billion gallons in 2013. Nevertheless, it would be a significant increase from actual supply in 2014 of 2.68 billion gallons and would recognize the lower volumes already supplied to date in 2015. The primary reason that 2014 advanced biofuel volumes were below 2013 volumes is that imports of sugarcane ethanol were 435 million gallons in 2013 but only 64 million gallons in 2014.[62] If this reduction had not occurred in 2014, total advanced biofuel volumes could have been above 3.00 billion gallons. Therefore, we believe that 2.90 billion gallons of advanced biofuel is within reach of the market in 2015, despite late issuance of this proposal. While it would require the market to supply more advanced biofuel in 2015 than was actually supplied in 2014, supplies that increase annually is exactly what Congress expected the RFS program to compel. Indeed, an examination of the volumes of advanced biofuel set forth in the Clean Air Act shows that Congress intended that the rate of growth accelerate every single year between 2009 and 2015, though cellulosic biofuel represents the majority of this growth.

A 2015 volume requirement of 2.90 billion gallons for advanced biofuel would be a substantial reduction from the statutory volume target of 5.50 billion gallons. As discussed in Section II.A.4, we believe that a reduction from the statutory volumes is necessary given the limitations on production and import capabilities and constraints imposed by the ability of vehicles and engines to use renewable fuels, particularly ethanol. Growth in advanced biofuel supply from 2014 to 2015 would be about 220 million gallons, substantially less than the growth in the statutory volume target of 1,750 million gallons. However, growth of 220 million gallons from 2014 to 2015 would require the market to respond to the standard we set by supplying more advanced biofuel than would be expected absent the RFS program, and to do so in substantially less than a full calendar year. Indeed without the RFS program, actual supply in 2015 may be no different than it was in 2014. Nevertheless, we believe that 2.90 billion gallons of advanced biofuel is possible given the potential for higher volumes of domestic and imported advanced biofuels, including biodiesel and sugarcane ethanol, among others, and would achieve both the intent of Congress to drive the market forward and also acknowledge the clear limitations on supply that exist. We believe that 2.90 billion gallons represents the maximum amount of advanced biofuel that can be supplied in 2015.

Similarly, for total renewable fuel, we are proposing a reduction in the 2015 statutory volume target of 20.50 billion gallons to 16.30 billion gallons. While the statutory volume target for total renewable fuel cannot be achieved in 2015 as discussed in Section II.A.4, we believe that some growth can be expected in 2015 as the annual volume requirement we set in the RFS program drives expansion in production and import capabilities and infrastructure, and incentivizes more favorable pricing of renewable fuels in the marketplace. Much of the increase from 2014 of about 370 million gallons would result from the increase in the advanced biofuel standard of 2.90 billion gallons discussed above, with the remainder resulting from growth in the use of conventional renewable fuel such as corn ethanol. We believe that the market has already demonstrated that this increment of growth is possible. For instance, growth in total renewable fuel in 2014 was 390 million gallons, and in 2013 it was even higher, despite the fact that in both years the gasoline pool was essentially saturated with ethanol.[63] Thus, growth of 370 million gallons is within reach of a responsive market even though 2015 is partially over.

We request comment on our proposal for 2.90 billion gallons of advanced biofuel and 16.30 billion gallons of total renewable fuel for 2015. Specifically, we request comment on whether these proposed volumes appropriately reflect constraints on supply resulting from the E10 blendwall and limitations in production and import capabilities, as well as the ability of the market to respond to the standards we set in the time available. Since we recognize that these proposed volumes represent our

[62] Based on import data from EMTS.

[63] According to EIA's Short-Term Energy Outlook (May 2015), pool-wide ethanol content was about 9.75% in 2013 and 9.85% in 2014.

proposed judgment as to the maximum amount of renewable fuel that can be supplied in 2015, and commenters may have information that supports a different assessment, we request comment on whether higher or lower volume requirements for advanced biofuel and total renewable fuel for 2015 would be more appropriate. For example, some commenters may view the market as unable to overcome barriers such as significant availability of E85 to consumers in the 2015 timeframe or significantly higher volumes of BBD than were supplied in 2014, and would therefore suggest applicable volumes for 2015 closer to what we are proposing for 2014. Other commenters may be more optimistic about the ability of the market to respond to this NPRM and the final rule in the time period remaining in 2015, and may suggest that once we have exercised our authority to waive volumes of advanced biofuel and total renewable fuel under the cellulosic waiver authority, additional volume waivers under the general waiver authority for total renewable fuel for 2015 are unnecessary. Finally, while we believe that growth in advanced biofuel should be a priority in light of the lifecycle greenhouse gas emissions reductions goals of the statute, and have reflected this view in our proposed volume requirements, we also request comment on whether a different relative growth in advanced biofuel and conventional renewable fuel would be appropriate.

3. 2016

We intend to finalize the volume requirements for 2016 by November 30 of this year, in accordance with the schedule set forth in the statute. As a result, obligated parties and other stakeholders in the marketplace will have the full compliance year to respond to the standards that we set for 2016, unlike for 2015 when they will only have part of the year to respond to the standards. We believe, therefore, that the supply of renewable fuels to vehicles can grow more dramatically in 2016 than in 2015. Moreover, as for the 2015 proposal, we believe that this growth should emphasize advanced biofuels, as Congress envisioned that all renewable fuel growth after 2014 would arise from growth in advanced biofuel as opposed to conventional fuels. Advanced biofuels are required to have substantially greater GHG benefits than conventional renewable fuel. As a program designed not only to increase the nation's energy security position but also contribute to efforts to reduce impacts of climate change, we believe that a focus on growth in advanced biofuel is appropriate. However, we also acknowledge that the volume of non-advanced biofuel production and use that has been achieved to date falls short of the volumes that Congress envisioned. Therefore we believe it is appropriate to provide for the continued growth of conventional renewable fuels at this time as well.

We are proposing that the advanced biofuel volume requirement would grow by 500 million gallons in 2016, as compared to 2015, while the remainder (the non-advanced portion) of the total renewable fuel requirement would grow by 600 million gallons in the same timeframe. As a result, the 2016 advanced biofuel and total renewable fuel requirements would be 3.40 billion gallons and 17.40 billion gallons, respectively. The corresponding amount of conventional renewable fuel that would be needed would be 14.0 billion gallons. These proposed volumes for both advanced biofuel and total renewable fuel represent substantial reductions from the volumes specified in the statute for 2016. While we do expect the market to respond to the standards we set to drive changes in production and consumption infrastructure as well as more favorable relative pricing, we do not have confidence that those changes could occur fast enough to attain volumes larger than we are proposing for 2016.

While the reductions in the statutory volumes that we are proposing are substantial, the volume requirements that we are proposing for 2016 would nevertheless be significantly larger than any previous volume requirements. The market would need to respond by increasing domestic production and/or imports of renewable fuel, by significantly expanding the infrastructure for distributing and consuming that renewable fuel, and by improving the relative pricing of renewable fuels and conventional transportation fuels at the retail level to ensure that they are attractive to consumers. As described more fully in the next section, we believe that the market has the capability of doing this in 2016 and thus reaching the volumes that we are proposing.

We request comment on our proposal for 3.40 billion gallons of advanced biofuel and 17.40 billion gallons of total renewable fuel for 2016; in particular we request comment on whether these proposed 2016 volumes appropriately reflect constraints on supply resulting from the E10 blendwall and limitations in production and import capabilities, as well as the ability of the market to respond to the standards we set in the time available. Our intent is to set volumes at the maximum level that in our judgment can be supplied to consumers, and we request comment on whether higher or lower volume requirements for advanced biofuel and total renewable fuel for 2016 would be more appropriate. As for 2015, we request comment on whether volumes closer to those we are proposing for 2014 would be more appropriate for 2016, or alternatively whether it would be appropriate to only waive volumes of advanced biofuel and total renewable fuel under the cellulosic waiver authority for 2016 without waiving volumes of advanced biofuel or total renewable fuel under the general waiver authority. Finally, while we believe that growth in advanced biofuel should be a priority and have reflected this view in our proposed volume requirements, we also request comment on whether a different relative growth in advanced biofuel and conventional renewable fuel would be appropriate.

D. Market Response to Proposed Volume Requirements for 2016

In recognition of the fact that the various constraints on supply that exist today were not as significant in years past, the volumes of advanced biofuel and total renewable fuel that we are proposing for 2016 would require increases from 2014 levels that, while substantial, are less than the increases that actually occurred in 2013. Moreover, as shown in Figures II.D–1, II.D–2, and II.D–3, the volume requirements in 2015 and 2016 would follow an upward trend consistent with that from 2012–2014, extending the market activities that produced increases in past years to the near future.

Figure II.D-1
Proposed Growth in Advanced Biofuel[64]

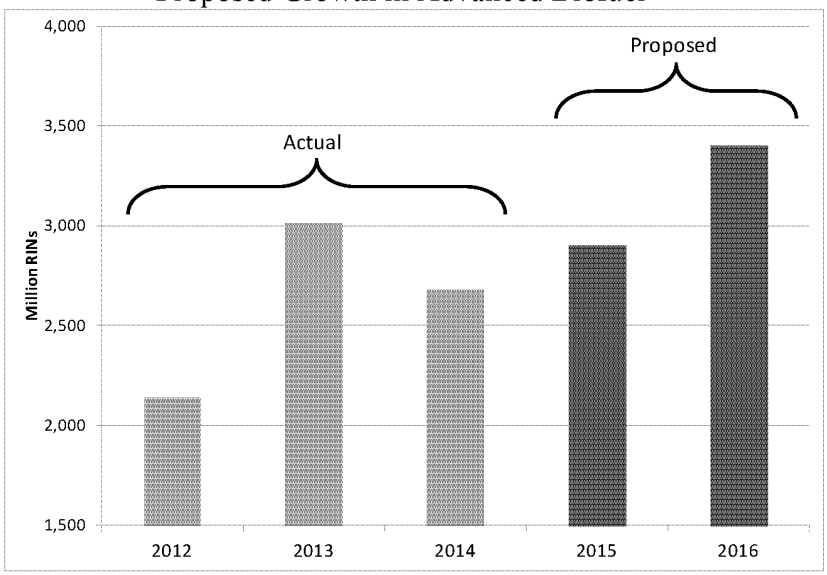
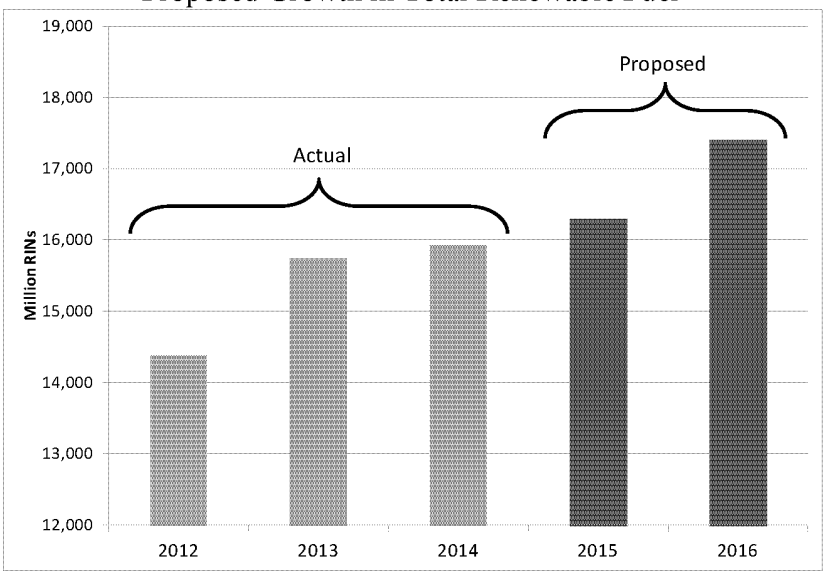
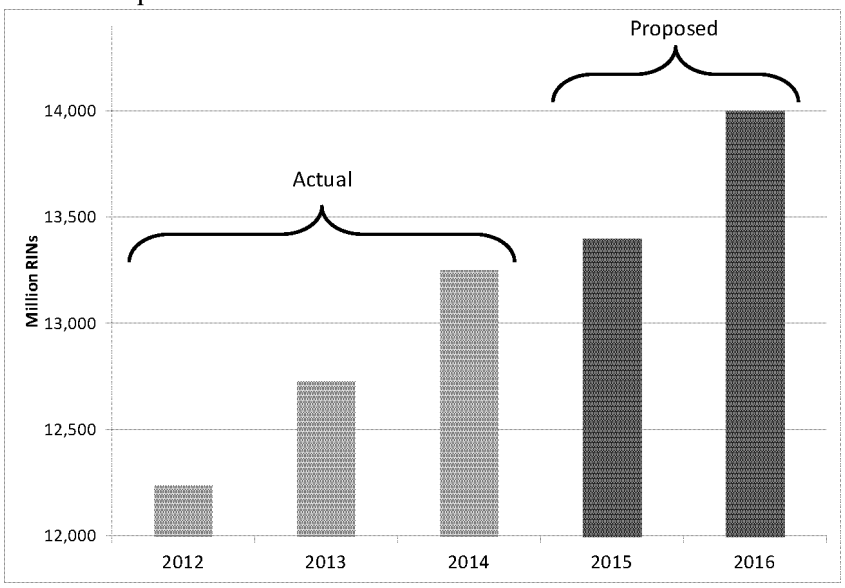


Figure II.D-2
Proposed Growth in Total Renewable Fuel



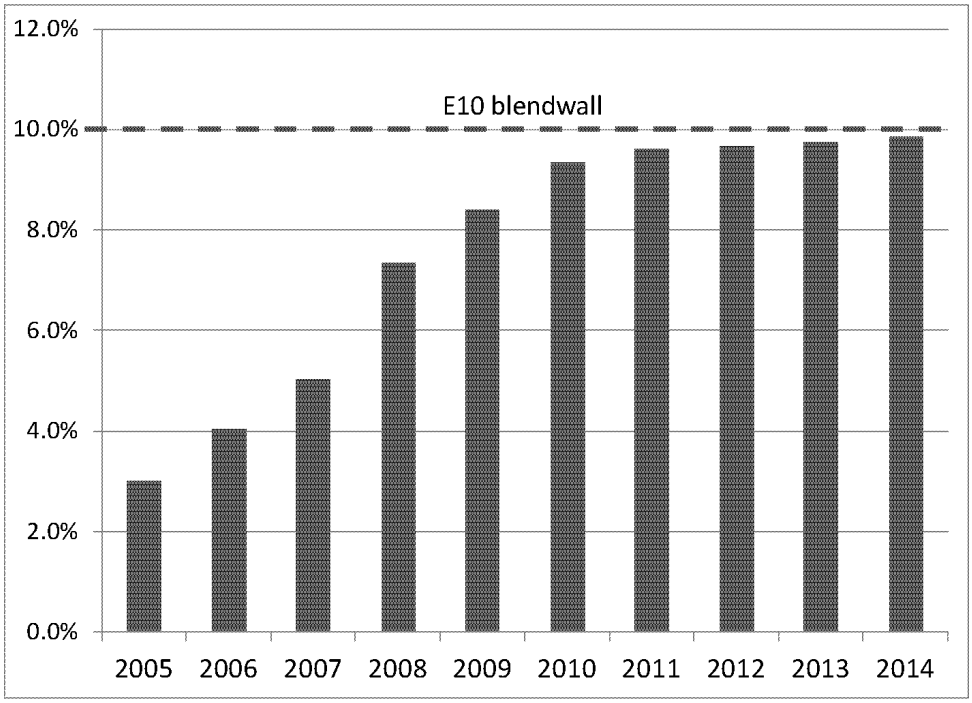
[64] As described in Section II.C.2, 2014 advanded biofuel bolumes were below 2013 volumes primarily because imports of sugarcane ethanol were 435 million gallons in 2013 but only 64 million gallons in 2014. BBD volumes were slightly higher in 2014 than they were in 2013.

Figure II.D-3
Proposed Growth in Conventional Renewable Fuel



We believe the required volumes being proposed for advanced biofuel and total renewable fuel for 2015 and 2016 reflect the maximum volumes that can reasonably be expected to be produced and consumed for those years. While we acknowledge that there is considerable judgment involved in identifying the appropriate volumes, we note that each increment is increasingly difficult for the market to accommodate. For instance, the use of ethanol in gasoline increased dramatically between 2000 and 2009, but by 2010 nearly all gasoline contained ethanol. Additional volumes of ethanol use in 2010 and thereafter increased much more slowly as the market approached the E10 blendwall.

Figure II.D-4
Ethanol Concentration of Gasoline



Source: EIA's Short Term Energy Outlook

This trend suggests that increases in renewable fuel use after 2014 will require more dramatic efforts than in the past. Implementation of the RFS program to date has led to ethanol use that is essentially at the E10 blendwall today. Any further growth in ethanol volumes must entail the use of higher-ethanol blends such as E15 and E85. As the volume requirements we are proposing for 2016 represent significant increases from 2014, we believe it would be unreasonable to expect the market to supply more than the proposed volumes.

In order to demonstrate that the volume requirements that we are proposing are achievable, we investigated a number of scenarios involving different types and sources of renewable fuel. Each of these scenarios differs in terms of the volumes of higher ethanol blends that would be supplied and the relative volumes of such fuels as BBD, imported sugarcane ethanol, corn-ethanol, renewable diesel, and other non-ethanol renewable fuel. While we cannot predict precisely how the market would respond to the standards we are proposing, the fact that at least some of the scenarios fall within the reasonably expected capabilities of the market demonstrates that the volume requirements we are proposing are achievable.

Section II.D.1 below describes the E10 blendwall, while Section II.D.2 uses estimates of ethanol volumes associated with the E10 blendwall as the basis for a number of volume scenarios that include possible volumes of E85 use and the associated need for other renewable fuels to meet the proposed volume requirements. While we have focused this discussion on our proposal for volumes for 2016, a similar pattern would exist with respect to our proposal for 2015 volumes.

1. E10 Blendwall

In 2007 when Congress enacted the Energy Independence and Security Act with provisions for the current RFS program, the gasoline pool was composed of about half E10 and half E0. Today it is almost entirely E10. While the E0 pool has been shrinking, the pools of E10, E15, and higher level ethanol blends up to E85 have been increasing. In the context of determining the total volume of ethanol that can be supplied to vehicles in 2016, all of these gasoline-ethanol blends could potentially play a role.

For 2016, the portion of the statutory applicable volume for total renewable fuel that may be satisfied with non-advanced biofuel (e.g., conventional renewable fuel, which is primarily ethanol) is 15.0 billion, and this amount is 67% of the total renewable fuel volume target of 22.25 billion gallons specified by the statute for 2016.[65] However, the ability of the market to use ethanol in 2016 is constrained by the E10 blendwall, the volume of ethanol that could be used if all gasoline contained 10% ethanol and there were no higher level ethanol blends. The amount of ethanol associated with the E10 blendwall is driven by the total demand for gasoline, and thus ethanol consumption will tend to increase if gasoline consumption increases and ethanol consumption will tend to decrease if gasoline consumption decreases. However, gasoline consumption is in fact declining. Prior to EISA's passage, EIA in its AEO 2007 projected that U.S. gasoline consumption would rise to about 159 billion gallons in 2016.[66] Instead, gasoline consumption has declined considerably, and EIA now predicts that approximately 137 billion gallons of gasoline will be consumed in 2016.[67] If all of the gasoline currently projected to be consumed contained 10% ethanol, a total of 13.7 billion gallons of ethanol would be used. For the RFS program, the decline in gasoline consumption has meant that the E10 blendwall has become constraining sooner and at a lower overall volume of ethanol than was expected in 2007. The trend of declining gasoline consumption is projected to continue for a number of reasons, including the increasingly stringent GHG and fuel economy standards set by EPA and NHTSA for on-road vehicles.

In the face of declining gasoline consumption, using greater volumes of ethanol beyond the E10 blendwall is a function of several factors, some legal, and some market-driven. The ability to go beyond the E10 blendwall is a function of actions taken by various fuel market participants, including obligated parties, renewable fuel producers, distributors and marketers, gasoline and diesel retailers, and consumers. In this regard, the market has significant potential flexibility and opportunities, and we believe that it can respond to the standards we set to drive the use of higher ethanol blends, the E10 blendwall notwithstanding.

Another constraint on the volume of ethanol that can be consumed is the demand for E0. While there will undoubtedly be some volumes of E0 in 2016, we expect such volumes to be lower than they were in the past as the market strives to expand consumption of ethanol under the influence of the RFS program. The primary context in which E0 might continue to be used is in recreational marine engines or other small nonroad engines. As described in a memorandum to the docket, we expect that the use of E0 rather than E10 would only reduce the total volume of ethanol that can be consumed by about 13 million gallons out of the 13.69 billion gallons we estimated above.[68] We have recently been made aware of E0 being marketed in some locations, such as Florida where recreational marine is a significant market, and in parts of the Midwest such as Iowa where concerns over ethanol's impact on other small engines may be at play. Nevertheless, we anticipate such E0 marketing to remain fairly limited given the widening use of ethanol overall. As a result, we do not anticipate the volume of E0 having a significant impact on ethanol consumption in 2016, particularly in light of the offsetting effect of E15 volumes as described below. Therefore, we have omitted from the scenarios described below the small expected impact of E0 use on total ethanol consumption.

Efforts to increase the use of ethanol beyond the blendwall is primarily a function of the volume of E85 that is consumed, since volumes of E15 are likely to continue to be small in 2016. Over the last several years, EPA has taken a series of regulatory steps to enable E15 to be sold in the U.S. In 2010 and 2011, EPA issued partial waivers to enable use of E15 in model year 2001 and newer motor vehicles, and in June of 2011, EPA finalized regulations to prevent misfueling of vehicles, engines, and equipment not covered by the partial waiver decisions. However, growth in the number of retail stations offering E15 has been slow—currently there are only about 100 stations offering it. Even if this number grows more quickly in 2015 and 2016 than it did previously, such increases would probably not increase total ethanol consumption by more than 5–10 million gallons in comparison to the use of ethanol in E10.[69] In the context of the

[65] Notably, by 2015 no more than 15 billion gallons of non-advanced biofuel may be used for compliance with RFS standards. The statute requires that advanced biofuel account for all the growth in renewable fuels used to comply with RFS standards beyond 2015.

[66] EIA's Annual Energy Outlook 2007: *http://www.eia.gov/forecasts/archive/aeo07/pdf/0383(2007).pdf.*

[67] EIA's May 2015 Short-Term Energy Outlook (STEO).

[68] ''Estimating E0 Volume Sold in the U.S. at marinas'', memorandum from Lester Wyborny to EPA docket EPA–HQ–OAR–2015–0111

[69] ''Projection of potential E15 consumption and its impacts on total ethanol consumption'', memorandum from David Korotney to EPA Air Docket EPA–HQ–OAR–2015–0111.

offsetting effect of E0 volumes on ethanol use that is described above, therefore, we have omitted this small impact on total ethanol consumption from the scenarios described below. However, in discussing the volume of E85 that might need to be consumed to meet the volume requirements we are proposing today, we acknowledge that there may also be some E15.

We have assumed that E10 contains 10.0% denatured ethanol. This is consistent with survey data collected by the Alliance of Automobile Manufacturers—indicating that the average ethanol content of all gasoline containing at least 5% ethanol is about 9.74%. This estimate is based on the use of ASTM International (ASTM) test method D–5599, which measures only the alcohol portion of the gasoline, not any denaturant that would have been included with the ethanol before it was blended into gasoline. Since the denaturant portion of ethanol is at least 2%, ethanol that is blended into gasoline contains no more than 98% ethanol. When blended into gasoline, therefore, the E98 would result in a gasoline-ethanol blend containing no more than 9.8% pure ethanol, or 10.0% denatured ethanol. Since all RFS ethanol volumes and RINs are also calculated on a denatured ethanol basis, it is thus appropriate to assume 10.0 percent denatured ethanol. Similarly, all references to ''ethanol'' in this NPRM mean denatured ethanol.

2. Volume Scenarios

The transportation fuel market is dynamic and complex, and the RFS program is only one of many factors that determine the relative types and amounts of renewable fuel that will be used. Thus, while we set the applicable volume requirements for advanced biofuel and total renewable fuel, we cannot precisely predict how the market will choose to meet those requirements. We can, however, delineate a range of possibilities, and doing so provides a means for judging whether the proposed volume requirements are attainable.

For our proposed 2016 total renewable fuel volume requirement of 17.40 billion gallons, there would be about 0.84 billion ethanol-equivalent gallons needed beyond that supplied by E10, the proposed BBD volume requirement of 1.8 billion actual gallons (equivalent to 2.7 billion D4 RINs as described in Section III.D.4), and that portion of the cellulosic biofuel volume which we would expect to be derived from non-ethanol biofuel (see Section IV.E).

TABLE II.D.2–1—BREAKDOWN OF RENEWABLE FUEL USE IN 2016 BASED ON PROPOSED VOLUMES

[Billion ethanol-equivalent gallons]

Total renewable fuel	17.40
Ethanol consumed as E10 [a]	−13.69
Non-ethanol cellulosic biofuel	−0.17
Biomass-based diesel [b]	−2.70
Additional renewable fuel that must be used	0.84

[a] Includes all sources of ethanol (cellulosic, advanced, and conventional)
[b] Represents 1.80 billion physical gallons.

The E10 blendwall and limitations in production capabilities for non-ethanol biofuels are the primary factors that constrain renewable fuel supply. Other factors include the relative pricing of renewable fuels and conventional (fossil-based) fuels, engine warranty limitations on the use of biodiesel for the current in-use fleet, and the need for distribution system improvements. All of these factors could play a role in determining how the market chooses to supply the additional 0.84 billion gallons needed as shown in Table II.D.2–1. The options available to the market to fulfill the need for 0.84 billion gallons of renewable fuel include the following:

- Increase the production and use of BBD above the proposed standard of 1.80 billion gallons
- Increase import and use of sugarcane ethanol and/or domestic production of corn-ethanol, which would result in a corresponding increase in E85
- Increase production and/or imports of conventional (D6) biodiesel and renewable diesel
- Increase the production of other non-ethanol advanced biofuels, such as heating oil, jet fuel, naphtha, butanol, and renewable fuels coprocessed with petroleum

In determining the amounts of each type of renewable fuel, the market would also need to satisfy the proposed advanced biofuel standard of 3.40 billion gallons.

To illustrate the possible outcomes, we evaluated a number of scenarios with varying levels of E85, imported sugarcane ethanol, advanced biodiesel and other non-ethanol advanced biofuels, and imported conventional biodiesel (likely to be made from palm oil). In doing so we sought to capture the range of possibilities for each individual source. For imported conventional biodiesel we examined volumes up to and slightly higher than the level that was actually imported in 2014—225 million gallons.[70] The range of other non-ethanol advanced biofuels is based on the range of volumes achieved over the last several years. Each of the rows in Table II.D.2–2 represent a scenario in which the proposed total renewable fuel and advanced biofuel volume requirements would be satisfied.

TABLE II.D.2–2—VOLUME SCENARIOS ILLUSTRATING POSSIBLE COMPLIANCE WITH 3.40 BILL GAL ADVANCED BIOFUEL AND 17.40 BILL GAL TOTAL RENEWABLE FUEL

[Million gallons] [a] [b]

E85	Total ethanol [c]	Biomass-based diesel (D4) [d]	Sugarcane ethanol (D5)	Other non-ethanol advanced (D5)	Conventional biodiesel (D6)
100	13,760	1,997	102	100	250
100	13,760	2,030	102	50	250
100	13,760	2,063	102	0	250
100	13,760	2,131	0	0	182
200	13,826	1,952	168	100	250
200	13,826	1,986	168	50	250

[70] Actual imports of conventional non-ethanol renewable fuels in 2014 were 53 million gallons of biodiesel and 151 million gallons of renewable diesel. They have been represented here in biodiesel-equivalents for simplicity.

TABLE II.D.2–2—VOLUME SCENARIOS ILLUSTRATING POSSIBLE COMPLIANCE WITH 3.40 BILL GAL ADVANCED BIOFUEL AND 17.40 BILL GAL TOTAL RENEWABLE FUEL—Continued

[Million gallons] [a] [b]

E85	Total ethanol [c]	Biomass-based diesel (D4) [d]	Sugarcane ethanol (D5)	Other non-ethanol advanced (D5)	Conventional biodiesel (D6)
200	13,826	2,019	168	0	250
200	13,826	2,065	0	100	138
400	13,959	1,898	301	50	250
400	13,959	1,989	113	100	125
400	13,959	2,056	113	0	125
400	13,959	2,098	0	50	50
600	14,091	1,800	433	64	250
600	14,091	1,901	245	100	125
600	14,091	2,026	58	100	0
600	14,091	2,093	58	0	0

[a] Assumes that the cellulosic biofuel proposed standard for 2016 is 206 mill gal, of which 33 mill gal is assumed to be ethanol for the purposes of these scenarios and the remainder is primarily biogas.

[b] Biomass-based diesel and conventional biodiesel are given as biodiesel-equivalent volumes. Others are given as ethanol-equivalent volumes. Biodiesel-equivalent volumes can be converted to ethanol-equivalent volumes by multiplying by 1.5.

[c] For the range of total ethanol shown in this table, the nationwide poolwide average ethanol content would range from 10.05% to 10.28%. The majority of gasoline will contain 10% ethanol, and some gasoline will contain higher levels of ethanol such as E15 or E85.

[d] Includes supply from both domestic producers as well as imports.

The scenarios in the table above are clearly not the only ways that the market could choose to meet the total renewable fuel and advanced biofuel volume requirements that we are proposing today, but they are illustrative of many ways that it could play out. While we are not in a position to predict how the market would respond to the volume requirements we are proposing today, we believe that the range of possibilities for E85, BBD, and other sources is a clear indication that the standards we are proposing are achievable.

With regard to E85, according to EIA there will be about 16 million FFVs in the in-use fleet in 2016 with a total consumption capacity of about 14 billion gallons of E85.[71] While only about 2% of retail stations nationwide currently offer E85, the fraction of FFVs with access to E85 is higher than 2% since the vast majority of vehicles are within reasonable range of more than one retail station on typical trips. If only 5% of all FFVs had a retail station nearby that offered E85, they could consume 800 million gallons of E85 in 2016 under favorable consumer pricing conditions. We recognize that the market would need to compel E85 prices to be increasingly favorable relative to E10 in order to provide the incentive for FFV owners to purchase E85, but this is exactly how a fully functional market will react to standards designed to drive growth in renewable fuel as Congress intended. Thus we believe it is possible for the market to reach volumes perhaps as high as 600 million gallons under favorable pricing conditions (i.e., where consumers believe they are obtaining an economic advantage through purchase of E85).

We also believe that it is possible for the market to exceed 1.8 billion gallons of BBD in 2016. As of 2013, the total production capacity for all registered and unregistered biodiesel facilities was about 3.6 billion gallons,[72] substantially more than the actual domestic production in 2014 of 1.46 billion gallons.[73] More than 2.7 billion gallons of this production capacity has already been registered under the RFS program. Moreover, the U.S. imported several hundred million gallons of biodiesel and renewable diesel in 2014. The combined volumes of soybean oil, corn oil, and waste oils produced annually is far more than would be needed to produce 2.1 billion gallons of biodiesel. It is possible that the market could divert additional feedstocks from food and other domestic uses or exports to the production of biodiesel. For instance, in 2014 exports of soy oil were 250 million gallons and exports of rendered fats and greases was 440 million gallons.[74] [75]

As Table II.D.2–2 illustrates, the proposed standards could result in the consumption of as much as 2.3 billion gallons of D4 and D6 biodiesel and renewable diesel, representing an increase of about 600 million gallons over the historical high. While this would be a substantial increase, we believe that it is possible. A portion of this increase is likely to be renewable diesel which is indistinguishable from conventional diesel fuel and thus would experience no impediments related to cold temperatures or manufacturer warranties; in both 2013 and 2014, the market supplied about 300 million gallons of renewable diesel. Even if there were no renewable diesel, 2.3 billion gallons of biodiesel would represent less than 4% of the nationwide pool of diesel fuel in 2016. Because essentially all engine manufacturer warranties permit up to 5% biodiesel to be used in their engines, and most medium and heavy-duty engine manufacturers warrant the use of blends up to B20 in their more recent models,[76] the use of biodiesel in 4% of the overall diesel pool should be possible from a consumption viewpoint. For instance, most diesel fuel could contain 5% biodiesel while still allowing some diesel fuel to contain no biodiesel to accommodate that used in northern states during the coldest months of the year. Also, B20 could be used in a number of centrally-fuelled fleets composed of newer engines without violating manufacturer warranties, and additional volumes of biodiesel could be used in heating oil. It is reasonable to expect that the

[71] According to AEO2015, Table 42, total vehicle miles travelled by FFVs in 2016 will be about 7.95% of all light-duty gasoline-powered vehicles, equivalent to about 10.9 bill gal of E10 or 13.9 bill gal of E85.

[72] A complete list of biodiesel plants and their capacities as of 2–6–13 has been placed in the docket. We are not aware of significant changes to the industry profile since this list was compiled.

[73] 1.46 bill gal represents total domestic production of both D4 biodiesel and renewable diesel.

[74] USDA Economic Research Service, Oil Crops Yearbook, Table 5, ''Soybean oil: Supply, disappearance, and price'', updated 3/30/2015. Assumes 7.68 lb/gal.

[75] Render Magazine, April 2015. Table 2. Assumes 7.68 lb/gal.

[76] ''OEM Support,'' fact sheet from National Biodiesel Board, August 2014.

infrastructure that already exists to distribute and blend such fuels could be expanded to accommodate this additional volume in the time available.

While the scenarios in Table II.D.2–2 are intended to demonstrate the flexibility that the market has to respond to the volumes we are proposing, and indeed many additional scenarios could be generated, we do not believe that all scenarios are equally likely. Certainly some are more likely than others. However, we are not in a position to identify those that are most likely and we are not in a position to predict what will actually occur. In particular, those scenarios that represent reliance on one source without taking advantage of supply from other sources are, we believe, least likely to occur.

The market can be expected to choose the lowest cost path to compliance, but regulated parties may also respond to the standards we set with investments in production, distribution, and consumption infrastructure that is focused on longer term growth. Such investments could result in the selection of higher cost options in the near term, but would enable lower costs in the longer term. Other activities that result in more favorable pricing between renewable fuels and fossil-based fuels will also play a role in determining the actual mix of types and amounts of biofuels used to meet the final standards, and such activities cannot be predicted. Because of these complexities in market dynamics, we do not believe it would be appropriate to identify a specific scenario from Table II.D.2–2 as being most representative of how the market will respond to the proposed volume requirements.

Further, it would be inappropriate to construct new scenarios based on the highest volumes in each category that are shown in Table II.D.2–2 in order to argue for higher volume requirements than we have proposed. Doing so would presume that the specific volumes for each type of renewable fuel, and thus the underlying scenarios, are all equally likely or equally achievable. We have more confidence in the ability of the market to achieve 3.40 billion gallons of advanced biofuel through some combination of different types of renewable fuel than we have in the ability of the market to achieve a specific level of, say, BBD. Thus, for instance, while the highest BBD volume shown in Table II.D.2–2 is 2,131 million gallons, we are not able to say whether this specific level of BBD is one that the market could be expected to achieve in 2016, notwithstanding our belief that such volumes are theoretically possible as described earlier. The same is true for the highest level of E85 shown in Table II.D.2–2 of 600 million gallons, or the highest level of sugarcane ethanol of 433 million gallons. In addition, the consumption of each fuel in Table II.D.2–2 is not independent of the consumption of the other fuels in the table. For example, greater BBD production reduces the likelihood of large imports of palm biodiesel because these two fuels compete against one another. The probability that the upper limits of all sources shown in Table II.D.2–2 could be achieved simultaneously is extremely unlikely.

The range of options available to the market to attain compliance with the proposed volume requirements provide us with confidence that they are achievable. Nevertheless, we recognize that to the extent that the proposed waivers rely on a finding of ''inadequate domestic supply'', our objective is to set the volume requirements as precisely as possible at the intersection between an ''inadequate supply'' and supply that is adequate. Given the complexities of the fuels market, this is a very challenging task, and one that necessarily involves considerable judgment. Based on our assessment of both the current capabilities of the industry and the power of the market to respond to ambitious volume requirements, we believe that our proposed volumes are the best possible estimate of the intersection between ''inadequate supply'' and supply that is adequate.

Because the standards that we are proposing would compel the market to supply higher volumes than would occur in the absence of an RFS program and indeed higher volumes than are currently being supplied, RIN prices are likely to be higher than historical levels. RIN price increases are an expected market response to an increased renewable fuel mandate that is pushing volumes beyond levels that the market would otherwise use. Furthermore, high RIN prices help to promote growth in renewable fuel supply. For instance, higher RIN prices would likely increase the incentive to import renewable fuels. Both ethanol and biodiesel/renewable diesel worldwide could be diverted from their current markets given a sufficiently high RIN price. High RIN prices can also provide the potential for reductions in the retail selling prices of E85 and E15 if distributors, blenders, and retailers pass the value of those RINs to end users. Finally, sustained high RIN prices create the incentives needed to spur investment in new technologies and production capacity, a critical need if the market is going to continue expanding in future years according to Congress' intentions.

Given the variability in potential compliance scenarios that exists, we believe that regulated parties have the ability to meet the proposed standards for 2016. Stakeholders have the ability to overcome market barriers to expanded use of renewable fuels, making the standards we are proposing today attainable. Potential actions that stakeholders can take include:

- Working with vehicle manufacturers to increase the number of FFVs in the fleet
- Increasing the number of retail stations offering E15 and E85 through direct installation of new equipment or providing grants to retail owners, and locating those stations offering E15/E85 closest to higher populations of vehicles than can use those fuels
- Developing contractual mechanisms to ensure favorable pricing of E15 and E85 at retail compared to E10 to boost sales volumes
- Increased production and/or imports of non-ethanol renewable fuels (e.g., greater production of drop-in biofuels)
- Expanded co-production of non-ethanol renewable fuels with petroleum at new and existing facilities

Finally, the RFS program contains two other provisions that provide additional flexibility to obligated parties in the event that they choose not to invest in increasing the supply of renewable fuels. The first is the option to carry a deficit into 2017. This option would provide the industry additional time to increase supply. The second available flexibility is carryover RINs, discussed in more detail in Section II.F.

E. Treatment of Carryover RINs

Neither the statute nor EPA regulations specify how or whether EPA should consider the availability of carryover RINs in exercising its waiver authorities either in the standard-setting context or in response to petitions for a waiver during a compliance year. As described in the 2007 rulemaking establishing the RFS regulatory program,[77] carryover RINs are intended to provide flexibility in the face of a variety of circumstances that could limit the availability of RINs, including weather-related damage to renewable fuel feedstocks and other circumstances affecting the supply of renewable fuel that is needed to meet the standards. In the 2010–2012 time period, obligated parties collectively surpassed the RFS renewable fuel blending requirements,

[77] 72 FR 23900, May 1, 2007.

and were able to accumulate 2.6 billion carryover RINs.

The potential role of carryover RINs in minimizing waivers of the statutory applicable volume targets was first addressed in the context of the rule establishing RFS standards for 2013. In the context of that rulemaking, we estimated that 14.5 billion gallons of ethanol would be needed to meet the total statutory total renewable fuel volume target of 16.55 billion gallons, assuming that no BBD was produced above the 1.28 billion gallons required by the BBD standard. We also determined that the total amount of ethanol the market could absorb as E10 in 2013 was 13.1 billion gallons, leaving a potential gap of 1.4 billion gallons. We then described how BBD production in excess of the BBD standard, increased production of other non-ethanol renewable fuels, and use of E85 could contribute to the needed gallons. We also pointed out that about 2.6 billion carryover RINs would be available in 2013, which was more than enough to cover the potential gap of 1.4 billion gallons if other approaches to compliance were not realized. We decided, therefore, that a waiver of the statutory applicable volume of total renewable fuel was not needed in 2013.[78] Our approach was challenged in court, and upheld in Monroe Energy v. EPA.[79]

We are not now in a position to confidently assess the volume of carryover RINs currently available, since obligated parties and exporters have not yet submitted their compliance demonstrations for 2013. However, based on the number of RINs generated in 2013 and available data on renewable fuel exports and RIN retirements in 2013, we estimate that 800 million carryover RINs will need to be used for compliance with the 2013 RFS standards. This will reduce the bank of carryover RINs to approximately 1.8 billion RINs. For purposes of our proposed volume requirements for 2014, 2015, and 2016, we considered whether some specific number of carryover RINs below the current level of 1.8 billion would be sufficient for the critical compliance flexibility, market liquidity, and program buffer functions served by carryover RINs, such that we could effectively require some use of carryover RINs by setting applicable volume requirements at levels higher than could be achieved through actual renewable fuel blending and use in these years.

We believe, however, that it would be prudent, and would advance the long-term objectives of the Act, not to set standards for 2014, 2015, and 2016 so as to intentionally draw down the current bank of carryover RINs. We believe that the availability of this full volume of carryover RINs will be important for both obligated parties and the RFS program itself in addressing significant future uncertainties and challenges, particularly since compliance with the proposed advanced and total renewable fuel standards is expected to require significant progress in growing and sustaining production of advanced biofuels and using ethanol in quantities that exceed the E10 blendwall.[80]

Although the issue in this proposed rulemaking is whether to waive statutory applicable volumes in the context of establishing new standards, we note that the availability of carryover RINs is an important factor in deciding whether to waive standards already in effect. Each year, obligated parties make significant efforts to comply with RFS requirements, and participants in the renewable fuels market make significant efforts to supply the renewable fuels needed for compliance. Changing those requirements during the compliance year to address unforeseen supply disruptions or for other reasons would be disruptive to businesses and therefore to the long-term objectives of the RFS program to provide incentives to industry to increase the production and use of renewable fuels. Preserving the current bank of carryover RINs at this time will reduce the risk that waivers may be needed after the 2014, 2015 and 2016 standards are in place to address unforeseen circumstances.[81]

In addition, the RIN system was developed in part to implement the statutory requirement for obligated parties to earn ''credits'' for overcompliance that could be used in another year or sold to others. The RFS standards are a mandate with serious ramifications to obligated parties that fail to comply. As intended by Congress, carryover RINs help provide compliance flexibility. We appreciate that obligated parties make individual decisions about whether and how many RINs to acquire for their compliance management purposes, and that a decision by EPA to effectively ''draw down'' their bank of carryover RINs in calculating future volume requirements may decrease their compliance flexibility, increase their risk of noncompliance, and affect their incentives to build-up carryover RIN balances. We understand that obligated parties in many instances acquire RINs for carryover to provide just that kind of flexibility, and that assuming use of carryover RINs in setting the RFS standards may in the future discourage that kind of responsible behavior.

Finally, we appreciate that with the increasing renewable fuel volume targets established in the Act for the future, combined with the projected decreasing use of gasoline and diesel fuel resulting from more stringent vehicle emission and mileage requirements, the ability of obligated parties to increase the bank of carryover RINs through additional overcompliance in the future will be much more difficult. Therefore, any draw-down in the bank of carryover RINs required through setting volume requirements at levels higher than can be achieved through actual renewable fuel use could not likely be reversed in the future. Given the importance of carryover RINs noted above, this consideration suggests that a deliberate draw-down of the RIN bank would not be prudent.

For all of the reasons noted above, EPA is not proposing to set renewable fuel volume requirements at levels that would envision the draw-down in the bank of carryover RINs. We welcome comments on this analysis and thoughts on how EPA should consider carryover RINs in establishing renewable fuel volume requirements for 2014, 2015, and 2016.

F. Impacts of Proposed Standards on Costs

In the following sections we provide cost estimates for three illustrative scenarios—one, if the entire change in the advanced standards is met with soybean oil BBD; two, if the entire change in the advanced standards is met with sugarcane ethanol from Brazil; and three, if the entire change in the conventional standards (*i.e.*, non-advanced) is met with corn ethanol. While a variety of biofuels could help fulfill the advanced standard beyond soybean oil BBD and sugarcane ethanol

[78] 78 FR 49794, August 15, 2013.

[79] *Monroe Energy* v. *EPA*, 750 F.3d 909 (D.C. Cir. 2014).

[80] As previously explained in this action, the ''E10 blendwall'' is the volume of ethanol that can be consumed domestically as E10. We expect that compliance with the total renewable fuel volume requirements will require more ethanol use than is possible through widespread use of E10.

[81] The statute and EPA's regulations provide another means of compliance flexibility—obligated parties may carry forward a compliance deficit for one year. But the statute and regulations also require that any deficit be paid back in the following year and that the standards applicable in the following year be met. Given that our proposed standards increase year to year, it may be increasingly difficult for an obligated party to both repay a deficit and meet higher standards in the same year. Thus, this provision does not replace carryover RINs as an important compliance tool to address increasingly challenging requirements and unforeseen circumstances.

from Brazil, these two biofuels have been most widely used in the past. We believe these scenarios provide illustrative costs of meeting the proposed standards. For this analysis, we estimate the per gallon costs of producing biodiesel, sugarcane ethanol and corn ethanol relative to the petroleum fuel they replace at the wholesale level, then multiply these per gallon costs by the applicable volumes established in this rule for the advanced and total renewable fuel categories. More background information on this section, including details of the data sources used and assumptions made for each of the scenarios, can be found in a memorandum submitted to the docket.[82]

A number of different scenarios could be considered the ''baseline'' for the assessment of the costs of this rule. For the purposes of showing illustrative overall costs of this rulemaking, we are proposing to use the preceding year's standard as the baseline (e.g., the baseline for the 2016 advanced standard is the proposed applicable 2015 advanced standard, etc.), an approach consistent with past practices.

The 2014 standards were not finalized in 2014 so it is difficult to estimate what their costs may have been. Market participants may have anticipated a final 2014 standard would require higher levels of biofuels than the market would provide in the absence of the standard, which would contribute to the positive RIN prices witnessed in 2014. In contrast, the 2014 standards being proposed in this rulemaking represent reductions in both the advanced and conventional volumes compared to the 2013 standards, suggesting a reduction in costs for this proposed 2014 rule compared to the 2013 standards. Finally, the 2014 standards being proposed in this rulemaking are based on actual production levels in 2014, suggesting that the 2014 standards we are proposing are what would have happened in the marketplace absent a rulemaking. Given the complexity of this issue, we have not attempted to estimate the costs of the 2014 standards. Therefore, we only provide illustrative costs for the 2015 and 2016 advanced biofuel standards and total renewable fuel standards.

Because we are focusing on the wholesale level in each of the three scenarios, these comparisons do not consider taxes, retail margins, and any other costs or transfers that occur at or after the point of blending (*i.e.*, transfers are payments within society and not additional costs). Further, we do not attempt to estimate potential costs related to infrastructure expansion with increased biofuel volumes. In addition, because more ethanol gallons must be consumed to go the same distance as gasoline and more biomass-based diesel must be consumed to go the same distance as petroleum diesel due to each of the biofuels' lesser energy content, we consider the costs of ethanol and biomass-based diesel on an energy equivalent basis to their petroleum replacements (*i.e.*, per energy equivalent gallon (EEG)).

For our first scenario, we consider the costs of soybean-based biodiesel to meet the entire change in the advanced standards. The proposed 2014 standard is being set at the actual level of advanced biofuels produced in 2014, 2.68 billion gallons. The total advanced biofuel volumes are being proposed for 2015 at 2.90 billion gallons and 3.40 billion gallons in 2016. Comparing the difference in costs between biomass-based diesel and petroleum-based diesel, we estimate a cost difference that ranges from $1.48 to $1.56/EEG in 2015 and from $1.45 to $2.09/EEG in 2016. Multiplying the per gallon cost estimates by the volume of fuel displaced by the advanced standard, on an energy equivalent basis, results in an overall annual cost of $218 to $229 million in 2015 and $483 to $697 million in 2016.

For our second scenario, we provide illustrative estimates of what the potential costs might be if all additional volumes used to meet the 2015 and 2016 advanced biofuel standards above the previous year's advanced biofuel standard are met with imported Brazilian sugarcane ethanol. Comparing the difference in costs between sugarcane ethanol and the wholesale gasoline price on a per gallon basis, we estimate cost differences that range from $1.04 to $2.80/EEG in 2015 and from $0.85 to $2.61/EEG in 2016. Taking the difference in per gallon costs for sugarcane ethanol and the wholesale gasoline price and multiplying that by the volume of petroleum displaced on an energy equivalent basis from the advanced standard results in an overall estimated annual cost of $228 to $615 million for 2015 and $424 to $1,303 million for 2016.

For the third scenario, we assess the difference in cost associated with a change in the implied volumes available for conventional (*i.e.*, non-advanced) biofuels for 2015 and 2016. We provide illustrative estimates of what the potential costs might be if corn ethanol is used to meet the entire conventional renewable fuel volumes. The implied 2014 volume allowance for conventional renewable fuel is 13.25 billion gallons, 13.40 billion gallons in 2015, and 14.00 billion gallons in 2016. If corn ethanol is used to meet the difference between the implied 2014 to 2015 and 2015 to 2016 conventional renewable fuel volume increases, an increase of 150 million gallons of corn ethanol would be required in 2015 and 600 million gallons in 2016. Comparing the difference in costs between corn ethanol and the wholesale gasoline price, we estimate cost differences that range from $0.81 to $0.92/EEG in 2015 and from $0.58 to $0.90/EEG in 2016. Taking the difference in per gallon costs between the corn ethanol and the wholesale gasoline price estimates and multiplying that by the volume of petroleum displaced on an energy equivalent basis by the conventional standard results in an overall estimated annual cost of $122 to $138 million for 2015 and $348 to $541 million for 2016.

An alternative way of looking at the illustrative costs in 2016, given the fact that this is a three year rule and the 2015 standards may change, is to consider a volume change relative to the 2014 proposed standard. The cost estimate for meeting the 2016 standard would range from $695 to $1,003 million if the entire advanced standard were to be met with soybean-based diesel. The cost estimates would range from $610 to $1,877 million if the entire advanced standard were met with sugarcane ethanol. The cost estimate for meeting the entire conventional standard in 2016 with corn ethanol would range from $435 to $676 million.

The short time frame provided for the annual renewable fuel rule process does not allow sufficient time for EPA to conduct a comprehensive analysis of the benefits of the 2015 and 2016 standards and the statute does not require it. Moreover, as discussed in the proposed rule establishing the 1.28 billion gallon requirement for BBD in 2013, the costs and benefits of the RFS program as a whole are best assessed when the program is fully mature in 2022.[83] We continue to believe that this is the case, as the annual standard-setting process encourages consideration of the program on a piecemeal (*i.e.*, year to year) basis, which may not reflect the long-term economic effects of the program. Therefore, for the purpose of this annual rulemaking, we have not quantified benefits for the 2015 and 2016 proposed standards. We do not have a quantified estimate of the GHG impacts for the

[82] ''Illustrative Costs Impact of the Proposed Annual RFS2 Standards, 2014–2017,'' Memorandum from Michael Shelby to EPA Air Docket EPA–HQ–OAR–2015–0111.

[83] 77 FR 59477, September 27, 2012.

single year (*e.g.*, 2015, 2016). When the RFS program is fully phased in, the program will result in considerable volumes of renewable fuels that will reduce GHG emissions in comparison to the fossil fuels which they replace. EPA estimated greenhouse gas, energy security and air quality impacts and benefits for the 2010 Proposed RFS Rule for 2022.

III. Proposed Biomass-Based Diesel Volumes for 2014–2017

In this section we discuss the proposed biomass-based diesel (BBD) applicable volumes for 2014 through 2017. It is important to note that the BBD volume requirement is nested within both the advanced biofuel and the total renewable fuel volume requirements; so that any ''excess'' BBD produced beyond the mandated BBD volume can be used to satisfy both these other applicable volume requirements. Therefore, in assessing what is the appropriate applicable BBD volume for 2014–2017, it is important to consider not only the volume for BBD, which effectively guarantees a minimum amount that will be produced, but also the advanced biofuel and total renewable fuel volume requirements, which historically have played a significant role in determining demand for BBD as well.

In proposing an applicable volume for 2017 we are addressing the volume requirement but not the percent standards, in order to satisfy a statutory requirement that when EPA sets the applicable volumes in the absence of a statutory volume target, that we do so no later than 14 months before the first year for which such applicable volume will apply.[84] Since the statute does not specify a BBD volume target for 2017, we plan to finalize the applicable volume by this November. Since the statute includes applicable volume targets for advanced biofuel, total renewable fuel and cellulosic biofuel for 2017, we are not required to establish 2017 applicable volumes for them at this time. We believe it is prudent to delay establishing such volume targets until the statutory deadline of November 30, 2016, to enable EPA to use the most up-to-date information prior to the start of the calendar year.

A. Statutory Requirements

The statute establishes applicable volume targets for years through 2022 for cellulosic biofuel, advanced biofuel, and total renewable fuel. For BBD, applicable volume targets are specified in the statute only through 2012. For years after those for which applicable volumes are specified in the statute, EPA is required under CAA section 211(o)(2)(B)(ii) to determine the applicable volume, in coordination with the Secretary of Energy and the Secretary of Agriculture, based on a review of the implementation of the program during calendar years for which the statute specifies the applicable volumes and an analysis of the following factors:

1. The impact of the production and use of renewable fuels on the environment, including on air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply;
2. The impact of renewable fuels on the energy security of the United States;
3. The expected annual rate of future commercial production of renewable fuels, including advanced biofuels in each category (cellulosic biofuel and BBD);
4. The impact of renewable fuels on the infrastructure of the United States, including deliverability of materials, goods, and products other than renewable fuel, and the sufficiency of infrastructure to deliver and use renewable fuel;
5. The impact of the use of renewable fuels on the cost to consumers of transportation fuel and on the cost to transport goods; and
6. The impact of the use of renewable fuels on other factors, including job creation, the price and supply of agricultural commodities, rural economic development, and food prices.

The statute also specifies that the applicable volume for BBD cannot be less than the applicable volume for calendar year 2012, which is 1.0 billion gallons. The statute does not, however, establish any other numeric criteria, or provide any guidance on how the EPA should weigh the importance of the often competing factors, and the overarching goals of the statute when the EPA sets the applicable volumes in years after those for which the statute specifies applicable volumes. In the period 2013–2022, the statute specifies increasing applicable volumes of cellulosic biofuel, advanced biofuel, and total renewable fuel, but provides no guidance on the extent to which BBD volumes should grow.

B. BBD Production and Compliance in Previous Years

Due to the delayed issuance of the major regulatory revisions necessary to implement changes enacted through the Energy Independence and Security Act of 2007, EPA established a 2010 BBD standard that reflected volume requirements for both 2009 and 2010, and allowed RINs generated as early as 2008 to be used for compliance with that standard. Given the complexity associated with the 2010 BBD standard, we begin our review of implementation of the program with the 2011 compliance year. Reviewing the implementation of the BBD standards in previous years is required by the CAA, and also provides insight into the capabilities of the BBD industry to produce and import fuel. It also helps us to understand what factors, beyond the BBD standard, may incentivize the production and import of BBD. The number of BBD RINs generated, along with the number of RINs retired for reasons other than compliance with the annual BBD standards, are shown in Table III.B–1 below.

TABLE III.B–1—BIOMASS-BASED RIN GENERATION AND STANDARDS IN 2011–2013

[Million gallons] [85]

	BBD RINs generated	Exported BBD (RINs)	BBD RINs retired, non-compliance reasons	Available BBD RINs	BBD standard (Gallons)	BBD standard (RINs) [86]
2011	1,692	110	97	1,484	800	1,200
2012	1,737	193	80	1,465	1,000	1,500
2013	2,739	295	94	2,350	1,280	1,920

[84] CAA 211(o)(2)(B)(ii).

[85] Net BBD RINs Generated and BBD RINs Retired for Non-Compliance Reasons information from EMTS. Biodiesel Export information from EIA (*http://www.eia.gov/dnav/pet/pet_move_expc_a_EPOORDB_EEX_mbbl_a.htm*).

[86] Each gallon of biodiesel generates 1.5 RINs due to its higher energy content per gallon than ethanol. Renewable diesel generates between 1.5 and 1.7 RINs per gallon.

In reviewing historical BBD RIN generation and use we see that the number of RINs available for compliance purposes exceeded the BBD standard by a significant margin in 2011 and 2013. Additional demand for biodiesel may have been driven by a number of factors, including demand to satisfy the advanced biofuel and total renewable fuels standards, the biodiesel tax credit, and favorable blending economics. In 2012 the available BBD RINs were slightly less than the BBD standard. There are many reasons this may have been the case, including the lapse of the biodiesel tax credit at the end of 2011.[87]

While total BBD volume produced and imported in 2013 was 1.79 billion gallons (2.74 billion BBD RINs), it is also instructive to review the data on volumes that were produced domestically, imported, exported, and retired for reasons other than compliance. Total domestic production of BBD was 1.45 billion gallons (2.19 billion RINs), while imports resulted in an additional 0.34 billion gallons (0.55 billion RINs).[88] This volume was not entirely available for compliance purposes, however, since some of the BBD produced domestically was exported and some RINs had to be retired for purposes other than compliance. Based on EIA export data, we estimate that 0.196 billion gallons (0.295 billion RINs) of BBD was exported in 2013.[89] A corresponding number of BBD RINs will eventually be retired by exporters, as required by the RFS regulations, and therefore are not available for use by refiners and importers in satisfying their 2013 obligations.[90] Additionally, 0.094 billion BBD RINs were retired for reasons other than compliance, such as volume error corrections, contaminated or spoiled fuel, or fuel used for purposes other than transportation fuel, heating oil, or jet fuel. Based on this information, the actual amount of BBD available for compliance in 2013 totaled 2.36 billion RINs, representing approximately 1.55 billion gallons of BBD. This is 430 million more BBD RINs than were required for compliance with the BBD standard in 2013.

C. Applicable Volume of Biomass-Based Diesel for 2014

For 2014 we are proposing to base the applicable volume requirements on the number of RINs supplied in 2014. We propose to define supply for 2014 as the number of BBD RINs that were available for compliance in 2014. Supply would thus include RINs that were generated for renewable fuel produced or imported in 2014 as recorded in the EMTS, minus any RINs that have already been retired or would be expected to be retired to cover exports of renewable fuels or for any purpose other than compliance. RINs that have already been retired for such circumstances as RINs being invalid, spills, corrected and replaced RINs, etc. are recorded in EMTS on an ongoing basis. However, complete information on RINs that are retired to cover exports of renewable fuel is not available through EMTS until after the compliance demonstration deadline for a given calendar year has passed. Since compliance cannot occur until the standards are set, we propose to use biodiesel export information from EIA in 2014 to estimate the number of 2014 BBD RINs that will be retired to satisfy obligations associated with exported BBD.

Actual supply of BBD in 2014 is shown in Table III.C–1 below. Further details are provided in a memorandum to the docket.[91] Since EIA does not distinguish exports by D code, we assumed that all biodiesel exports represent D4 BBD. We expect that any errors introduced by this assumption will be very small.

TABLE III.C–1—2014 ACTUAL SUPPLY OF BIOMASS-BASED DIESEL

	Domestic production and imports	Exports	BBD RINs retired, non-compliance reasons	Net supply
Million RINs	2,709	124	82	2,502
Million gallons	1,763	83	48	1,631

While the actual physical volume of D4 BBD supplied in 2014 was 1.63 billion gallons, we have used a physical volume of 1.67 billion gallons as the 2014 volume requirement because the formula for calculating the BBD percentage standard in 40 CFR 80.1405(c) includes a factor of 1.5, presuming that all BBD is biodiesel. In reality, a significant portion of BBD in 2014 was renewable diesel (328 million gallons), which generally has an equivalence value of 1.7 rather than 1.5. The use of a physical volume of 1.67 billion gallons ensures that the applicable percentage standard for BBD accounts for the higher equivalence value of the volume of renewable diesel produced and imported in 2014 and results in a requirement for 2.50 billion RINs, consistent with supply.

D. Determination of Applicable Volume of Biomass-Based Diesel for 2015–2017

The statute requires that, in determining the applicable volume of BBD, we review the implementation of the program in previous years. Based on the fact that the industry made more BBD available in 2011 and 2013 than volume requirements for those years, we conclude that the BBD standard is not the sole driver for the amount of BBD produced or imported into the United

[87] The biodiesel tax credit was reauthorized in January 2013. It applied retroactively for 2012 and for the remainder of 2013. It was once again extended in December 2014 through the end of 2014.

[88] ''Summary of data on 2013 RIN generation and consumption'', memorandum from David Korotney to EPA Air Docket EPA–HQ–OAR–2015–0111.

According to the U.S. Energy Information Administration (EIA), Annual import data for BBD (Biodiesel and Renewable diesel countries contributing to BBD imports (million gallons) were Argentina = 132, Aruba = 6, Australia = 1, Belgium = 5, Canada = 45, Finland = 36, Germany = 61, Indonesia = 52, Netherlands = 8, Norway = 9, South Korea = 20, Panama = 3, Singapore = 164, Spain = 4, Taiwan = 1. (See *http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_EPOORDB_im0_mbbl_a.htm* and *http://www.eia.gov/dnav/pet/pet_move_impcus_a2_nus_EPOORDO_im0_mbbl_a.htm* (last accessed April 6, 2015).

Note that not all of the imported volumes generated BBD (D4) RINs. Some of this volume may have generated Renewable Fuel (D6) RINs or no RINs at all.

[89] U.S. Energy Information Administration (EIA). Annual export data for Biodiesel (2013). See *http://www.eia.gov/dnav/pet/pet_move_expc_a_EPOORDB_EEX_mbbl_a.htm* (last accessed April 6, 2015).

[90] EMTS includes data on RINs retired for export, but the values are incomplete as of this writing since the 2013 compliance deadline has not yet passed.

[91] ''Summary of data on 2014 RIN Generation and Consumption,'' memorandum from David Korotney to EPA docket EPA–HQ–OAR–2015–0111.

States.[92] We believe that the advanced biofuel and total renewable fuel standards are significant factors in the amount of biodiesel produced and imported into the United States. We also believe that the advanced and/or total renewable fuel standards can continue to drive BBD supply in 2015–2017. As described in more detail in Section II.C, we are proposing volumes of advanced biofuel and total renewable fuel for 2015–2016 that require substantial growth beyond the volumes supplied in 2014. We expect that the advanced biofuel and total renewable fuel standards will continue to provide incentives for BBD supply that exceeds the BBD standard.

However, we recognize that in addition to being a component of advanced biofuel and total renewable fuel, Congress also intended that BBD have its own specific standard. Given that the statute requires annual increases in advanced biofuel through 2022, it may be appropriate for BBD to play an increasing role in supplying advanced biofuels to the market, especially in light of the fact that BBD does not contribute to the E10 blendwall. This proposal seeks to balance the goals of supporting the BBD industry and incentivizing the production of non-BBD advanced biofuels by providing a guaranteed, increasing market for BBD and allowing all advanced biofuels to compete for market share within the advanced biofuel category. In doing so we have considered the ability of the advanced biofuel and total renewable fuel standards to incentivize an increasing supply of BBD, the implementation of the RFS program to date, and the statutory factors listed in CAA 211(o)(2)(B) (discussed in further detail in Section III.E below).

1. Implication of Nested Standards

The BBD standard is nested within the advanced biofuel and total renewable fuel standards. This means that when an obligated party retires a BBD RIN (D4) to satisfy their obligation, this RIN also counts towards meeting their advanced biofuel and total renewable fuel obligations. It also means that obligated parties may use BBD RINs in excess of their BBD obligations to satisfy their advanced biofuel and total renewable fuel obligations. Higher advanced biofuel and total renewable fuel standards, therefore, can create demand for BBD if there is an insufficient supply of other advanced or conventional renewable fuels to satisfy the standards, or if BBD RINs can be acquired at or below the price of other advanced or conventional biofuel RINs.

In reviewing the implementation of the RFS program to date, it is apparent that the advanced and/or total renewable fuel requirements were in fact helping to provide a market for volumes of biodiesel above the BBD standard. Table III.D.1–1 below shows the number of BBD RINs generated and available for use towards demonstrating compliance[93] in each year from 2011–2013. As can be seen from the table, in 2011 and 2013 the number of BBD RINs available for use exceeds the BBD standard. In 2013 the number of advanced RINs generated from fuels other than BBD is not large enough to satisfy the implied standard for ''other advanced'' biofuel (advanced biofuel that is not BBD or cellulosic biofuel). In fact, the amount by which the available BBD RINs exceed the BBD standard (421 million RINs) is slightly larger than the amount by which the non-BBD RINs fall short of the ''other advanced'' biofuel implied standard (285 million RINs). This supports the theory that the advanced biofuel standard provided an incentive to support BBD production and import into the United States in excess of the BBD standard.

TABLE III.D.1–1—BIOMASS-BASED DIESEL AND ADVANCED BIOFUEL RIN GENERATION AND STANDARDS

[Million gallons]

	Available BBD RINs	BBD standard (RINs)	Available non-biodiesel advanced biofuel	''Other'' Advanced biofuel requirement
2011	1,484	1,200	225	150
2012	1,465	1,500	597	500
2013	2,360	1,920	552	830

The prices paid for advanced biofuel and BBD RINs also support the theory that advanced biofuel and/or total renewable fuel standards provided sufficient incentive for additional biodiesel production and import. Because the BBD standard is nested within the advanced biofuel and total renewable fuel standards, we would expect the price of BBD RINs to exceed that of advanced and renewable RINs. If, however, BBD RINs are being used by obligated parties to satisfy their advanced biofuel and/or total renewable fuel obligations, above and beyond the BBD standard, we would expect the price of renewable fuel, advanced biofuel, and BBD RINs to converge. When examining RIN prices data from 2011 through 2014, shown in Figure III.D.1–1 below, we see that until January 2013 there is a consistent price differential between the price of BBD and the relatively cheaper advanced biofuel and renewable fuel RINs. Beginning in 2013 the price of BBD RINs and advanced biofuel RINs converge, and remain at a similar price throughout 2014. This is more evidence that suggests that the advanced biofuel standard and/or total renewable fuel standard is capable of incentivizing increased production and importation of BBD beyond the BBD standard, and that it in fact operated in this manner in 2013 and 2014.

[92] The blenders tax credit for biodiesel likely also incentivized additional biodiesel blending in these years.

[93] RINs available for use is number of RINs generated minus the number of RINs retired (or that we anticipate will be retired) for any reason other than a demonstration of annual compliance, such as RINs retired for exported biofuel, volume error corrections, enforcement actions, fuel used in applications other than transportation fuel, heating oil, or jet fuel, etc.

Figure III.D.1-1
RIN Prices: July 2011 – July 2014

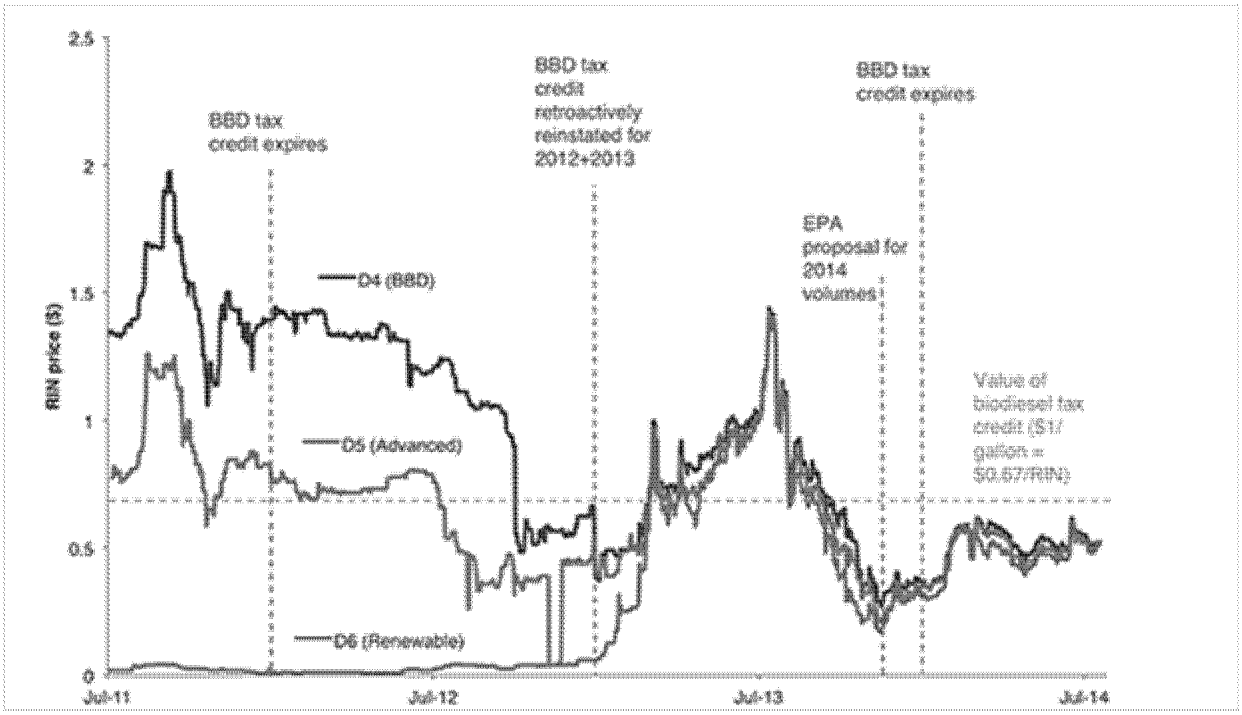


Image from ICCT. Available online: http://www.theicct.org/blogs/staff/does-biodiesel-really-need-tax-credit

2. Biomass-Based Diesel as a Fraction of Advanced Biofuel

Another implication of the fact that the BBD standard is nested within the advanced biofuel standard is that, for any given advanced biofuel standard, the higher the BBD standard is, the lower the opportunity for other non-BBD fuels to compete for market share within the context of the advanced biofuel standard. The statutory volumes of renewable fuel established by Congress in CAA section 211(o)(2)(B) allow for an opportunity for other advanced biofuels (advanced biofuels that do not qualify as cellulosic biofuel or BBD) to be used to satisfy the advanced biofuel standard after the cellulosic biofuel and BBD standards have been met. This unspecified advanced biofuel volume starts at 0.25 billion gallons in 2013 and grows to 3.5 billion gallons in 2022. It is, however, heavily dependent on EPA actions. Increasing the BBD standard above 1 billion gallons, as we did in 2013, reduces the potential market for other advanced biofuels to contribute towards meeting the advanced biofuel standard. Conversely, reducing the cellulosic biofuel standard while simultaneously maintaining the advanced biofuel standard (or reducing it by a lesser amount), as we have done each year since 2010, increases the potential market for other advanced biofuels.

Both BBD and other advanced biofuels achieve estimated greenhouse gas reductions of at least 50% relative to the petroleum fuels they replace. Increasing the guaranteed market for BBD, rather than allowing excess BBD to compete for market share with other advanced biofuels within the advanced biofuel standard, would likely reduce competition and thus result in increased costs associated with the RFS program with no additional GHG reductions. It will also have a negative impact on investment in the development and deployment of other advanced biofuels, as these fuels will have a lower potential market if the BBD standard is increased. The long term success of the RFS program will depend on the growth in a variety of advanced biofuels. The standards we set today must therefore provide an incentive for the ongoing research, development, and commercialization of a variety of types of advanced biofuels beyond just BBD. We note again, however, that allowing for a greater use of other advanced biofuels by setting a lower BBD standard does not limit the amount of BBD that may be used towards satisfying the advanced biofuel standard. If BBD can be supplied at a lower cost than other advanced biofuels it can—and we expect would—be used to satisfy the majority or even all of the unspecified volume of advanced biofuels. Allowing for a larger portion of the advanced biofuel standard to be unspecified, by setting a lower BBD standard, maintains an incentive for the development and deployment of other advanced biofuels, while at the same time allowing a level of competition that can reduce compliance costs while also allowing growth in the supply of BBD and maintaining the greenhouse gas emissions reductions achieved by the use of advanced biofuels in the RFS program. We believe these are important considerations in determining the required BBD volumes in the 2015–2017 time period, as well as in future years.

3. Ensuring Growth in Biomass-Based Diesel and Other Advanced Biofuel

While the ability of the advanced and total renewable fuel standards to incentivize increasing production of BBD and the desire to allow other advanced biofuels to compete with BBD for market share under the advanced standard suggest that a flat or even decreasing BBD volume requirement may be the optimal solution, these are not the only considerations. Despite many of these same issues being present

in 2013, EPA decided to increase the BBD standard in 2013 to 1.28 billion gallons. EPA's decision to establish the higher 1.28 billion gallon BBD volume for 2013 was made against the backdrop of the BBD industry having increased production from about 400 million gallons in 2010 to over 1 billion gallons in 2011.[94] At that time, we were not confident in the ability of other advanced biofuels to be able to supply all the necessary volume of advanced biofuel needed to offset the shortfall in cellulosic biofuel and to meet the statutory volume target of 2.75 billion gallons for advanced biofuel. EPA was also not completely confident in the ability of the BBD industry to further increase production without an increased BBD standard. While BBD production had performed well in 2011 and the early part of 2012, the biodiesel industry had gone through a period of instability in 2009 and 2010.[95]

During the development of the 2013 standards rulemaking, we were also concerned that the cellulosic biofuel standard, also nested within the advanced biofuel requirement, was lagging significantly behind the 1 billion gallon statutory volume target. The shortfall in cellulosic biofuel volume meant that either other sources of advanced biofuel would be necessary to fulfill the specified volumes in the statute for the advanced biofuel standard, or EPA would need to waive a portion of the advanced biofuel standard. It is in this context that EPA determined that raising the BBD requirement to 1.28 billion gallons was appropriate. Most importantly, an applicable volume requirement of 1.28 billion gallons was expected to encourage continued investment and innovation in the BBD industry, providing necessary assurances to the industry to increase production for 2013 while also serving the long term goal of the RFS statute to increase volumes of advanced biofuels over time.[96]

There are also advantages to increasing the BBD standard in order to help provide stability to the BBD industry. This industry is currently the single largest contributor to the advanced biofuel pool, one that to date has been largely responsible for providing the growth in advanced biofuels envisioned by Congress. Nevertheless, there has been variability in the number of biodiesel facilities in production over the last few years, as well as the percent utilization of individual facilities, both of which contribute uncertainty in the rate of production in the near future, and which can be mitigated to some degree with an increase in the BBD applicable volume. Increasing the BBD standard should help to provide market conditions that allow these BBD production facilities to operate with greater certainty. This result would be consistent with the goals of the Act to increase the production and use of renewable fuels.

4. Proposed Volumes for 2015–2017

With these considerations in mind, as well as our analysis of the factors specified in the statute and described below, and in coordination with the Departments of Agriculture and Energy, we are proposing to increase the applicable volume of BBD to 1.70 billion gallons for 2015, and to further increase the BBD volume requirement by 0.1 billion gallons in 2016 and 2017, respectively. We believe this proposal strikes the appropriate balance between providing a market environment where other advanced biofuels can compete, and achieving the benefits associated with increasing the required volume of BBD. Given our proposed volumes for advanced biofuel in these years, setting the BBD standard in this manner continues to allow a considerable portion of the advanced biofuel volume to be satisfied by either additional gallons of BBD or by other unspecified types of qualifying advanced biofuels (see Table III.D.4–1 below). While we have not yet determined the applicable volume of advanced biofuel for 2017, we anticipate the continued growth in the advanced biofuel standard such that the advanced biofuel standard will provide an incentive for both increasing volumes of BBD and other advanced biofuels. We believe maintaining this unspecified or other advanced biofuel volume will provide the incentive for development and growth in other types of advanced biofuels. At the same time, allowing the portion of the advanced biofuel volume requirement that is dedicated to BBD to increase concurrently with the increase in the overall advanced biofuel volume requirement will contribute to market certainty for both the BBD industry and the renewable fuels program in general.

TABLE III.D.4–1—PROPOSED BIOMASS-BASED DIESEL, CELLULOSIC BIOFUEL, AND ADVANCED BIOFUEL STANDARDS: 2015–2017

[Billion gallons]

	BBD (gallons)	BBD (RINs)	Cellulosic biofuel	Advanced biofuel	Unspecified advanced
2015	1.70	2.55	0.11	2.90	0.24
2016	1.80	2.70	0.20	3.40	0.50
2017	1.90	2.85	TBD	TBD	TBD

In proposing these standards for BBD for 2015–2017 EPA has taken into account the statutory requirements found in CAA section 211(o)(2)(B)(ii), including coordination with the Departments of Energy and Agriculture, review of the implementation of the renewable fuels program to date, and analysis of the statutory factors specified in CAA section 211(o)(2)(B)(ii)(I)–(VI). Of particular relevance in our review of the implementation of the renewable fuels program to date were the circumstances and context that led us to increase the BBD standard from 1.0 billion gallons in 2012 to 1.28 billion gallons for 2013, and the biofuel industry's successful performance in 2013. We have also reviewed the statutory factors in the context that the BBD volume requirement is nested within the advanced biofuels and total renewable fuels volume requirements. This discussion of the statutory factors is found in Section III.E., below.

In deciding to propose an applicable volume of 1.70 billion gallons of BBD for 2015, with annual increases of 0.10 billion gallons for 2016 and 2017, we

[94] 77 FR 59461 col. 1, September 27, 2012.

[95] Regulations of Fuels and Fuel Additives: 2013 BBD Renewable Fuel Volume; Proposed Rule. 77 FR 59458, 59460–59461. *http://www.epa.gov/otaq/fuels/renewablefuels/regulations.htm* (last accessed May 20, 2014).

[96] 77 FR 59458, 59462 and 59483.

considered not only the short-term impacts, but also the potential long-term impacts of our action on the RFS program. We took into account the competitive impact such an increase in the BBD set-aside would likely have on other advanced biofuel producers already in the marketplace as well as on potential new market entrants. This increase in the BBD set-aside through 2017 should result in a requirement for unspecified advanced biofuel sufficient to provide opportunity for continued investment in and growth of advanced biofuels other than BBD.

Raising the guaranteed BBD volume beyond the proposed volumes to a volume that approaches the maximum possible supply of BBD could result in a less competitive advanced biofuels market, increasing RIN prices, and a less efficient market-driven renewable fuels program. Our decision today to propose increasing the BBD volume in 2015–2017 by 100 million gallons per year would not be expected to lead to such adverse result. We believe that the proposed increases for 2015–2017 will both contribute to market stability for the renewable fuels program and continue to promote a growing and competitive advanced biofuels marketplace, one which encourages the growth and development of diverse biofuels along with additional volumes of BBD beyond the volumes required by the BBD standard. We request comment on our proposal for increasing the BBD applicable volumes in 2015–2017 and whether higher or lower volume requirements for BBD for 2015–2017 would be more appropriate.

E. Consideration of Statutory Factors for 2014–2017

In this section we discuss our considerations of the statutory factors set forth in CAA section 211(o)(2)(B)(ii)(I)–(VI). As discussed earlier in Section III.D.1, the BBD volume requirement is nested within both the advanced biofuel and the total renewable fuel volume requirements; so that any BBD produced beyond the mandated BBD volume can be used to satisfy both these other applicable volume requirements. The result is that in considering the statutory factors when setting the biomass-based standard we must consider the potential impacts of increasing BBD in comparison to other advanced biofuels,[97] not to diesel fuel. Greater or lesser applicable volumes of BBD do not change the amount of advanced biofuel used to displace petroleum fuels; rather, increasing the BBD applicable volume may result in the displacement of other types of advanced biofuels that could have been used to meet the advanced biofuels volume requirement.

1. Primary and Supplementary Statutory Factors Assessment for 2015–2017 Biomass-Based Diesel Applicable Volumes

EPA's primary assessment of the statutory factors for years 2015 through 2016 is that because the proposed advanced biofuel volume requirements for 2015–2016 reflect the maximum volumes of all advanced biofuels (including BBD) that can reasonably be expected to be produced and consumed, and because the BBD requirement is nested within the advanced biofuel volume requirement, we expect that the advanced biofuel volume requirement will determine the level of BBD production and import; the same volume of BBD will be produced and imported regardless of the BBD applicable volumes that we require for 2015–2016. This assessment is based in part on our review of implementation of the RFS program to date, as discussed in Sections III. B and D. Since our decision on the BBD applicable volumes for 2015–2016 is not expected to impact the volume of BBD produced and imported during this time period, we do not expect our decision to result in a difference in any of the factors we are required to evaluate pursuant to CAA section 211(o)(2)(B)(ii)(I)–(VI), with the exception, that in considering statutory factor 211(o)(2)(B)(ii)(III), we believe that our decision on the level of the nested BBD volume requirement can have an impact on the future development and marketing of non-BBD advanced biofuels and can also be seen as sending a supportive or non-supportive signal to potential investors in BBD.

Similarly for 2017, even though we are proposing only the 2017 BBD requirement at this time and not the 2017 advanced biofuel requirement, we believe this same primary assessment is appropriate since, as in previous years, the 2017 advanced biofuel requirement will be set to reflect the maximum volumes of all advanced biofuels (including BBD) that can reasonably be expected to be produced and consumed for 2017, and it is the advanced standard that can be expected to drive BBD production and use.

As an additional supplementary assessment, we have considered the potential impacts of modifying the applicable volume of BBD from the proposed levels of 1.70 billion gallons in 2015, 1.80 billion gallons in 2016, and 1.90 billion gallons in 2017, based on the assumption that in guaranteeing BBD volumes at any given level there could be greater use of BBD and a corresponding decrease in the use of other types of advanced biofuels for years 2015–2017. However, setting a higher or lower BBD volume requirement than the levels proposed would only be expected to impact BBD volumes on the margin, protecting to varying degrees this advanced biofuel from being outcompeted by other advanced biofuels. This assessment analyzes all of the statutory factors, and is described in a memorandum to the docket.[98] Overall, the supplemental assessment does not appear, based on available information, to provide a good reason for setting a higher or lower nested standard for BBD than 1.70 billion gallons in 2015, 1.80 billion gallons in 2016, and 1.90 billion gallons in 2017.

2. Assessment for 2014 Biomass-Based Diesel Applicable Volume

Given the fact that the 2014 compliance year has passed, we believe that our action in setting the 2014 BBD volume requirement will result in no real-world impacts, including no impacts with respect to the factors listed under CAA section 211(o)(2)(B)(ii)(I)–(VI). For example, there is no longer any ability for other advanced biofuels to compete with BBD for a greater share of the advanced biofuel pool in 2014, so there would be no marginal benefit in terms of incentivizing production of such fuels in setting a lower volume requirement than the volume of BBD that was actually produced and imported and available for compliance in 2014. Setting the applicable volume at a higher level would require a draw-down in the bank of carryover RINs, which EPA does not consider prudent for the reasons discussed in Section II.E. of this preamble. In light of these considerations, we propose to establish the 2014 applicable volume as equal to the volume actually produced and imported, which is available for compliance.

[97] While BBD can be used to satisfy the total renewable fuel requirement we anticipate that it will be used to satisfy the advanced biofuel volume requirement in 2015–2017. See Table II.D.2–2, ''Volume Scenarios Illustrating Possible Compliance with 3.40 Bill Gal Advanced Biofuel[a] and 17.40 Bill Gal Bill Gal Total Renewable Fuel''.

[98] ''Memorandum to docket: Statutory Factors Assessment for 2015–2017 BBD Applicable Volumes'' EPA–HQ–OAR–2015–0111.

IV. Proposed Cellulosic Biofuel Volume for 2014–2016

In the past several years the cellulosic biofuel industry has made significant progress towards commercial scale production. Quad County Corn Processors produced the first cellulosic biofuel RINs from corn kernel fiber at a corn ethanol plant in 2014. In addition, in 2014 two large scale cellulosic ethanol facilities owned and operated by the experienced biofuel production companies Abengoa and Poet completed construction. EPA also determined that compressed natural gas (CNG) and liquefied natural gas (LNG) produced from biogas from landfills, municipal waste-water treatment facility digesters, agricultural digesters, and separated municipal solid waste (MSW) digesters is eligible to generate cellulosic RINs. This determination lead to a significant increase in cellulosic RIN generation, as fuel that previously had been qualified to generate advanced biofuel RINs began to be used to generate cellulosic RINs. Efforts continue to be made at facilities across the country to reduce both capital costs and production costs associated with cellulosic biofuel production through technology advances and the development of best practices gained through operating experience. EPA also continues to support the ongoing development of cellulosic biofuels through actions such as the evaluation of new pathways with the potential to generate cellulosic biofuel RINs.[99] This section describes the available supply of cellulosic biofuel RINs in 2014, the volumes that we project will be produced or imported in 2015 and 2016, and some of the uncertainties associated with those volumes.

In order to project the volume of cellulosic biofuel production in 2015 and 2016 we considered data reported to EPA through the EPA Moderated Transaction System (EMTS) and information we collected regarding individual facilities that have produced or have the potential to produce qualifying volumes for consumption as transportation fuel, heating oil, or jet fuel in the U.S. in 2014, 2015, or 2016. New cellulosic biofuel production facilities projected to be brought online in the United States over the next few years would significantly increase the production capacity of the cellulosic industry. Operational experience gained at the first few commercial scale cellulosic biofuel production facilities should also lead to increasing production of cellulosic biofuel from existing production facilities. The following section discusses the companies the EPA reviewed in the process of projecting qualifying cellulosic biofuel production in the United States in 2015 and 2016. Information on these companies forms the basis for our production projections of cellulosic biofuel that will be produced for use as transportation fuel, heating oil, or jet fuel in the United States in these years (see Table IV–1 below). We request comment on the projected volumes of cellulosic biofuel production for each of these years, as well as the methodology used to project these volumes.

TABLE IV–1—PROPOSED CELLULOSIC BIOFUEL STANDARDS

Year	Volume (million gallons)
2014	33
2015	106
2016	206

A. Statutory Requirements

The volumes of renewable fuel to be used under the RFS program each year (absent an adjustment or waiver by EPA) are specified in CAA section 211(o)(2). The volumes of cellulosic biofuel specified in the statute for 2014, 2015, and 2016 are shown in Table IV.A–1 below. The statute provides that if EPA determines, based on EIA's estimate, that the projected volume of cellulosic biofuel production in a given year is less than the statutory volume, then EPA is to reduce the applicable volume of cellulosic biofuel to the projected volume available during that calendar year.[100]

TABLE IV.A–1—STATUTORY VOLUMES OF CELLULOSIC BIOFUEL

Year	Volume (million gallons)
2014	1,750
2015	3,000
2016	4,250

In addition, if EPA reduces the required volume of cellulosic biofuel below the level specified in the statute, the Act also indicates that we may reduce the applicable volumes of advanced biofuels and total renewable fuel by the same or a lesser volume, and we are required to make cellulosic waiver credits available. Our consideration of the 2014, 2015, and 2016 volume requirements for advanced biofuels and total renewable fuel is presented in Section II.

B. Cellulosic Biofuel Industry Assessment

In order to project cellulosic biofuel production for 2015 and 2016 we have tracked the progress of several dozen potential cellulosic biofuel production facilities. As we did in establishing the 2013 annual volumes, we have focused on facilities with the potential to produce commercial volumes of cellulosic biofuel rather than small R&D or pilot-scale facilities. We did so because the larger commercial-scale facilities are much more likely to generate RINs for the fuel they produce and the volumes they produce will have a far greater impact on the cellulosic biofuel standards for 2015—2016. From this list of facilities we used information from EMTS and publically available information, and information provided by representatives of potential cellulosic biofuel producers, to make a determination of which facilities are the most likely candidates to produce cellulosic biofuel and generate cellulosic biofuel RINs in 2015 and 2016. Each of these companies was investigated further in order to determine the current status of its facilities and its likely cellulosic biofuel production and RIN generation volumes for 2015 and 2016. Both in our discussions with representatives of each company [101] and as part of our internal evaluation process we gathered and analyzed information including, but not limited to, the funding status of these facilities, current status of the production technologies, anticipated construction and production ramp-up periods, facility registration status, and annual fuel production and RIN generation targets.

EPA is proposing to use a slightly different methodology for projecting the available volume of cellulosic biofuel for each of the three years. Our approach to each of these years can

[99] Additionally, on April 3rd, 2015 EPA published a direct final rule modifying the process by which the cellulosic waiver credit prices are established, and indicating the prices for these credits in 2014 and 2015 using the regulations modified by this rule (80 FR 18136, April 3, 2015).

[100] On January 25, 2013, the United States Court of Appeals for the District of Columbia Circuit issued its decision concerning a challenge to the 2012 cellulosic biofuel standard. In this decision the Court stated that in projecting potentially available volumes of cellulosic biofuel EPA must apply a ''neutral methodology'' aimed at providing a prediction of ''what will actually happen,'' as required by the statute.

[101] In determining appropriate volumes for CNG/LNG producers we did not contact individual producers but rather relied primarily on discussions with industry associations, and information on likely production facilities that are already registered under the RFS program. In some cases where further information was needed we did speak with individual companies.

broadly be described as one that seeks to use actual production volumes where they are available (such as for all of 2014 and several months of 2015) and to project production volumes from likely production facilities for future months in which actual production volumes are not available. In previous projections of cellulosic biofuel production EPA, as directed by the CAA, has considered information provided by EIA in making our projections. EPA received a letter from EIA on February 19, 2014 containing cellulosic biofuel projections for 2014,[102] but to date have not received any projections of cellulosic biofuel production for 2015 or 2016. As discussed in more detail below EPA now has data, through EMTS, on the actual number of cellulosic RINs generated in 2014 and we are proposing to establish the 2014 cellulosic biofuel standard using this data rather than EIA's projection from early 2014. We anticipate that for the final rule EIA will provide EPA with projected production volumes of cellulosic biofuel in 2015 and 2016 and we intend to consider these projections in our final rule.

Our approach for each of the three years is discussed in more detail in Sections IV.D–IV.F below. The remainder of this Section discusses the current status of the companies and facilities EPA expects may be in a position to produce commercial scale volumes of cellulosic biofuel by the end of 2016. This information forms the basis for our proposed standards for cellulosic biofuel for 2014, 2015, and 2016.

1. Potential Domestic Producers

There are a number of companies and facilities [103] located in the United States that have either already begun producing cellulosic biofuel for use as transportation fuel, heating oil, or jet fuel at a commercial scale, or are anticipated to be in a position to do so by the end of 2016. The financial incentive provided by cellulosic biofuel RINs, combined with the fact that all these facilities intend to produce fuel for domestic consumption using approved pathways, gives us a high degree of confidence that cellulosic biofuel RINs will be generated for any fuel produced. In order to generate RINs, each of these facilities must be registered under the RFS program and comply with all the regulatory requirements. This includes using an approved RIN-generating pathway and verifying that their feedstocks meet the definition of renewable biomass. Many of the companies and facilities have already successfully completed facility registration, and several have successfully generated RINs. A brief description of each of the companies that EPA believes may produce commercial scale volumes of RIN generating cellulosic biofuel by the end of 2016 can be found in a memorandum to the docket for this proposed rule.[104] These descriptions are based on a review of the publicly available information and information provided to EPA in conversations with company representatives. The key data for each of these companies used in our projection of the potentially available volume of cellulosic biofuel in 2015 and 2016 is summarized in Table IV.B.3–1 below.

2. Potential Foreign Sources of Cellulosic Biofuel

In addition to the potential sources of cellulosic biofuel located in the United States, there are several foreign cellulosic biofuel companies that may produce cellulosic biofuel in 2015 or 2016. These include facilities owned and operated by Beta Renewables, Enerkem, GranBio, and Raizen. All of these facilities use fuel production pathways that have been approved by EPA for cellulosic RIN generation provided eligible sources of renewable feedstock are used. These companies would therefore be eligible to register these facilities under the RFS program and generate RINs for any qualifying fuel imported into the United States. While these facilities may be able to generate RINs for any volumes of cellulosic biofuel they import into the United States, demand for the cellulosic biofuels they produce is expected to be high in local markets. EPA is charged with projecting the volume of cellulosic biofuel that will be produced or imported into the United States. Based on information available to EPA at the time of this proposed rulemaking, including the lack of cellulosic biofuel imports to date, we do not believe cellulosic biofuel will be imported into the United States from foreign cellulosic biofuel production facilities other than the Ensyn facility in Ontario, Canada. As such, production volumes from foreign facilities (with the exception of Ensyn) have not been included in our projection of potentially available volume for 2014–2016. EPA plans to continue to monitor the progress of foreign cellulosic biofuel facilities and may include volumes from foreign facilities in future rulemakings if appropriate and supported by new information.

3. Summary of Volume Projections for Individual Companies

The information we have gathered on cellulosic biofuel producers, described above, along with the data collected through EMTS forms the basis for our projected volumes of cellulosic biofuel production for each facility in 2015 and 2016. As in 2013, we have focused on commercial scale cellulosic biofuel production facilities. This focus is appropriate, as the volume of cellulosic biofuel produced from R&D and pilot scale facilities is quite small in relation to that expected from the commercial scale facilities. R&D and demonstration scale facilities have also generally not generated RINs for any fuel they have produced.

By 2016 there are a number of cellulosic biofuel production facilities that have the potential to produce fuel at commercial scale. Each of these facilities is discussed in a memorandum to the docket,[105] and the relevant information used to project a likely production range for each company is summarized in Table IV.B.3–1 below.[106] We will continue to monitor the status of these facilities and will update this information for the final rule.[107] If we receive information that suggests facilities not currently included in this table, either foreign or domestic, may produce commercial-scale volumes of cellulosic biofuel for use as transportation fuel, heating oil, or jet fuel in the United States by 2016 we will include them in our projections for our final rule as appropriate. We will also remove facilities from our projections if new information suggests

[102] Letter from Adam Sieminski, EIA Administrator to Gina McCarthy, EPA Administrator February 19, 2014.

[103] The volume projection from CNG/LNG producers does not represent production from a single company or facility, but rather a group of facilities utilizing the same production technology.

[104] ''Cellulosic Biofuel Producer Company Descriptions'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[105] ''Cellulosic Biofuel Producer Company Descriptions'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[106] For the purpose of the preamble discussion we have grouped together all facilities expected to produce cellulosic CNG/LNG. The individual facilities included in our assessment are listed in ''Assessment of Cellulosic Biofuel Production from Biogas (2015–2016)'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[107] Given timing constraints for issuing a final rule, EPA does not anticipate providing an opportunity for comment on any updated data. Commenters may therefore wish to focus their comments both on the types of data we are proposing be used, as well as EPA's proposed approach for using the data.

they will not produce cellulosic by 2016.

TABLE IV.B.3–1—PROJECTED PRODUCERS OF CELLULOSIC BIOFUEL BY 2016

Company name	Location	Feedstock	Fuel	Facility capacity (MGY) [108]	Construction start date	First production [109]
Abengoa	Hugoton, KS	Corn Stover	Ethanol	25	September 2011	April 2015.
Cool Planet	Alexandria, LA	Wood Waste	Gasoline	1	2Q 2015	Late 2016.
CNG/LNG Producers [110].	Various	Biogas	CNG/LNG	Various	N/A	August 2014.
DuPont	Nevada, IA	Corn Stover	Ethanol	30	November 2012	3Q 2015.
Edeniq	Various	Corn Kernel Fiber	Ethanol	Various	Various	2nd Half 2015.
Ensyn	Renfrew, ON	Wood Waste	Heating Oil	3	N/A	2014.
INEOS Bio	Vero Beach, FL	Vegetative Waste	Ethanol	8	February 2011	2Q 2015.
Poet	Emmetsburg, IA	Corn Stover	Ethanol	24	March 2012	3Q 2015.
QCCP	Galva, IA	Cork Kernel Fiber	Ethanol	2	Late 2013	October 2014.

C. Cellulosic Biofuel Volume for 2014

EPA is charged with projecting the available volume of cellulosic biofuel for each year, and to reduce the applicable volume of cellulosic biofuel to the level projected to be available for years in which the projected available volume falls below the cellulosic biofuel applicable volume target specified in the CAA 211(o)(2). EPA believes that for any historical time period, the required projection is best calculated as the sum of the cellulosic biofuel RINs (D3) and the cellulosic diesel RINs (D7) generated, adjusted for RINs that are retired for purposes other than compliance with the annual standards. EPA publishes the number of cellulosic biofuel and cellulosic diesel RINs generated on a month by month basis on our Web site.[111] The number of cellulosic biofuel and cellulosic diesel RINs generated for each month of 2014 can be found in Table IV.C–1 below. From this total, we subtract the number of cellulosic biofuel and cellulosic diesel RINs retired for reasons other than compliance with the annual standards, as these RINs are not available to obligated parties.[112] In calculating the number of cellulosic biofuel RINs available for compliance with the annual standards for 2014 we have assumed that there were no exports of cellulosic biofuel.[113] EPA proposes to establish the cellulosic biofuel requirement for 2014 at 33 million gallons. We believe this number, calculated by subtracting the total number of cellulosic biofuel RINs (D3 and D7) retired for reasons other than compliance with the annual standards from the total number of cellulosic biofuel RINs generated in 2014 (D3 and D7), represents the total available supply of cellulosic biofuel RINs for 2014.

TABLE IV.C–1—CELLULOSIC BIOFUEL RIN GENERATION IN 2014 [114]

	Cellulosic biofuel (D3)	Cellulosic diesel (D7)
January 2014	58,415	0
February 2014	7,072	0
March 2014	6,624	472
April 2014	643	10,950
May 2014	0	0
June 2014	0	0
July 2014	4,156	1,248
August 2014	3,492,106	5,532
September 2014	7,555,432	17,073
October 2014	7,047,762	24,030
November 2014	6,325,080	0
December 2014	8,863,270	0
Total	33,360,560	59,305
RINs retired for reasons other than compliance with the annual standards	346,318	4,997
RINs Available	33,014,242	54,308
Available Cellulosic RINs (D3 and D7)	33,068,550	

[108] The Facility Capacity is generally equal to the nameplate capacity provided to EPA by company representatives or found in publicly available information. If the facility has completed registration and the total permitted capacity is lower than the nameplate capacity then this lower volume is used as the facility capacity. For companies generating RINs for CNG/LNG derived from biogas the Facility Capacity is equal to the lower of the annualized rate of production of CNG/LNG from the facility or the sum of the volume of contracts in place for the sale of CNG/LNG for use as transportation fuel (reported as the actual peak capacity for these producers).

[109] Where a quarter is listed for the first production date EPA has assumed production begins in the middle month of the quarter (i.e. August for the 3rd quarter) for the purposes of projecting volumes

[110] For more information on these facilities see ''Assessment of Cellulosic Biofuel Production from Biogas (2015–2016)'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[111] *http://www.epa.gov/otaq/fuels/rfsdata/index.htm.*

[112] In 2014 Cellulosic Biofuel and Cellulosic Diesel RINs were retired for Remedial Actions and Invalid RINs.

[113] The vast majority of cellulosic biofuel RINs generated in 2014 (approximately 32 or the 33 million RINs) were for CNG or LNG. These fuels require verification that the CNG/LNG was used as transportation fuel in the United States in order for RINs to be generated.

D. Cellulosic Biofuel Volume for 2015

To project the volume of cellulosic biofuel in 2015, EPA has relied on a combination of production information reported to EPA through EMTS for months in which we have data available and facility or company specific estimates of likely production for months for which EMTS data is not available. For months in which information on the production of cellulosic biofuel is available we have used the methodology discussed in Section IV.C, subtracting the number of RINs retired for reasons other than compliance in 2015 from the total number of RINs produced in 2015 that are eligible to be used towards satisfying the cellulosic biofuel standard (D3 and D7 RINs). We have again assumed that no cellulosic biofuel was exported in the first three months of 2015. This data is shown in Table IV.D–1 below.

TABLE IV.D–1—CELLULOSIC BIOFUEL RIN GENERATION IN EARLY 2015

	Cellulosic biofuel (D3)	Cellulosic diesel (D7)
January 2015	4,076,744	0
February 2015	7,935,446	0
March 2015	7,799,749	0
Total	19,811,939	0
RINs retired for reasons other than compliance	76,942	0
RINs Available	19,734,997	0
Total Available Cellulosic RINs (D3 and D7)	19,734,997	

For months in which information is unavailable EPA has updated our projection methodology from the methodology used in previous rulemakings and our proposed rule for 2014. Our projection methodology starts with estimating a range of potential production volumes for each company for the portion of 2015 where production data is not available.[115] EPA has established a range of potential production volumes for each company such that it is possible, but unlikely, that the actual production will be above or below the range. We believe that it is more appropriate to project a range of potential production volumes rather than a single point estimate due to the highly uncertain and variable nature of biofuel production at cellulosic biofuel facilities, especially those in the early stages of production. The projected production ranges for each facility are used to generate a single point estimate for the total production of cellulosic biofuel from all companies in 2015 for the months in which actual production volumes through EMTS are not available.

In establishing a range for each company, we began by determining an appropriate low end of the range. The low end of the range for each company is designed to represent the volume of fuel EPA believes each company would produce if they are unable to begin fuel production on their expected start-up date and/or if they experience challenges that result in reduced production volumes or a longer than expected ramp-up period. In this proposal EPA has set the low end of the production range for each company based on the volume of RIN-generating cellulosic biofuel the company has produced in the most recent 12 months for which data is available.[116] Because we are not attempting to determine a low end of a likely production range for a full year, but rather only the months in 2015 for which data is not available, this number is then multiplied by a scaling factor [117] to appropriately scale this annual production volume for use as the low end of the range over the number of months of 2015 for which actual production data is unavailable.

This approach provides us with an objective methodology for calculating the low end of the potential production range for each company that we believe is appropriate in light of the history of start-up delays and missed production targets in the cellulosic biofuel industry. If a company has not yet begun producing RIN-generating volumes of cellulosic biofuel, our experience suggests that they may experience challenges in progressing toward commercial-scale production that would result in the delay of the production of cellulosic biofuel. We acknowledge that in the majority of cases cellulosic companies that have begun producing fuel and are currently in the start-up and ramp-up phases of production will increase their production of cellulosic biofuel from one year to the next as they work towards production rates at or near the facility capacity. Fuel production by these companies may, however, be interrupted, either intentionally or unexpectedly, and these interruptions may hinder the ability of these companies to increase biofuel production year over year. We will account for the likelihood of increasing production in developing the high end of each company's production range. Finally, there may be cases in which information is available that suggests a company is unlikely to meet the production volumes achieved in the previous 12 months for which data is available, due to technical, financial, or legal difficulties. We do not believe this is the case with any of the companies projected to produce cellulosic biofuel in 2015.

It is important to note that the low end of the range does not necessarily represent a worst-case scenario. The worst-case scenario for any of these facilities for the months in which we are projecting production is no production, as it is always possible that extreme circumstances or natural disasters may result in extended delays, facility damages, or liquidation. While not denying such a possibility, we nevertheless believe it is generally appropriate to use the production over the previous 12 months as the low end of the range, with exceptions made where available information indicates that such production may be unlikely. In situations where a company has not

[114] All numbers from EPA Web site: *http://www.epa.gov/otaq/fuels/rfsdata/index.htm.* Accessed February 9, 2015.

[115] For the purposes of projecting RIN generation from CNG/LNG projections were made for parent companies, generally representing multiple companies. For more detail see ''Assessment of Cellulosic Biofuel Production from Biogas (2015–2016)'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[116] For the final rule we intend to update this information and use the data available for the most recent 12 months at the time of the final rule.

[117] The scaling factor is 0.75; equal to the 9 months for which production data is being projected divided by 12.

produced any cellulosic biofuel in the previous 12 months, we believe it is appropriate to use zero as the low end of the projected production range given the many uncertainties and challenges associated with the commissioning and start-up of a new cellulosic biofuel production facility we have observed to date.

To determine the high end of the range of expected production volumes for each company we considered a variety of factors, including the expected start-up date and ramp-up period, facility capacity, and fuel off-take agreements. As a starting point, EPA calculated a production volume using the expected start-up date, facility capacity, and a benchmark of a six-month straight-line ramp-up period representing an optimistic ramp-up scenario.[118] We then compared the volume calculated using this methodology to the company's own expectations for the period in which we are projecting production where they were available. We are proposing that any company projection that exceeds our benchmark volume not be used for developing the high end of the range of expected production volumes. If the production estimate EPA received from a company was lower than the volume calculated using the projected start-up date, facility capacity, and six month straight-line ramp-up period, EPA used the company production targets instead. While we understand that many of these company projections represent the company's actual expectations for production, rather than a goal or high end of an expected production range, we do not believe it would be appropriate to ignore the history of the cellulosic biofuel industry. In previous years EPA has gathered information, including volume production projections, from companies with the potential to produce cellulosic biofuel. Each of these companies supported these projections with successful pilot- and demonstration-scale facilities as well as other supporting documentation. In each of these cases the companies were unable to meet their own volume projections, and in many cases were unable to produce any RIN-generating cellulosic biofuel.

The inability of cellulosic biofuel producers in previous years to achieve their projection production targets does not provide a sufficient basis for completely discounting production of cellulosic biofuel in future years, either for these same facilities that were previously unable to achieve their target projections or from new facilities expected to start-up in 2015 or 2016. Each of these companies is an individual case, with their own production technologies, construction and operations staffs, and financial situations, and we do not believe it is appropriate to dismiss all future potential cellulosic biofuel production because of the failure of several facilities to successfully operate at commercial scale. We do believe it strongly suggests that we should view the individual company projections as something other than the most likely outcomes. In order to take a ''neutral aim at accuracy'' in projecting cellulosic biofuel production volumes, as directed by the United States Court of Appeals for the DC Circuit, we have decided to treat these company projections as the high end of a potential production range unless this volume exceeds the volume calculated using our six-month straight-line ramp-up period methodology, suggesting that these company projections are unreasonably high. We will continue to monitor the progress and experience of the cellulosic biofuel industry and may adjust our approach as appropriate in light of additional experience.

We believe our range of projected production volumes for each company represents the range of what is likely to actually happen for each company. A brief overview of each of the companies we believe will produce cellulosic biofuel and make it commercially available in 2015 can be found in a memorandum to the docket.[119] In the case of cellulosic biofuel produced from CNG/LNG we have discussed the production potential from these facilities as a group rather than individually. EPA believes it is appropriate to discuss these facilities as a group since they are utilizing a proven production technology and face many of the same challenges related to demonstrating that the fuel they produce is used as transportation fuel and therefore eligible to generate RINs under the RFS program.[120]

After establishing a projected production range for each facility (or group of facilities for CNG/LNG producers), we must then determine a method for using these projected production ranges to project the volume of cellulosic biofuel most likely to be produced by the cellulosic biofuel industry as a whole in 2015. As discussed above, the high and the low end of the range for each company represents values such that it is possible but unlikely that actual volumes would fall outside of those ranges. At present, data does not exist to allow EPA to develop a unique production probability distribution for each company based on the available information. Even if EPA were able to undertake such a task there is no evidence that the distributions we developed would necessarily be more accurate than a standardized distribution curve as the cellulosic biofuel industry is still in its infancy and there is a high degree of uncertainty associated with many of the factors that will impact production at each individual facility. This is supported by the poor accuracy of the individual company estimates in previous years, which were made by individuals with significant technical expertise and knowledge of each individual company and technology.

Rather than attempting to develop a unique probability distribution curve that represents likely cellulosic biofuel production for each company, EPA has instead separated the list of potential cellulosic biofuel producers into two groups; those who have already achieved consistent commercial-scale production and those who have not. We believe grouping the potential cellulosic biofuel producers using the criteria of whether or not they have achieved consistent commercial-scale production is appropriate for the purposes of projecting a likely production volume. While each of these groupings contains a diverse set of companies with their own production technologies and challenges, we believe there is sufficient commonality in the challenges related to the funding, construction, commissioning, and start-up of commercial-scale cellulosic biofuel facilities to justify aggregating these company projections into a single group for the purposes of projecting the most likely production volume of cellulosic biofuel. The challenges new production facilities face are also significantly different than those of facilities ramping up production volumes to the facility

[118] We did not assume a six-month straight-line ramp-up period in determining the high end of the projected production range for CNG/LNG producers. This is because these facilities generally have a history of CNG/LNG production prior to producing RINs, and therefore do not face many of the start-up and scale-up challenges that impact new facilities. For further information on the methodology used to project cellulosic RIN generation from CNG/LNG producers see ''Assessment of Cellulosic Biofuel Production from Biogas (2015–2016)'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[119] ''Cellulosic Biofuel Producer Company Descriptions'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

[120] For individual company information see ''Cellulosic Biofuel Individual Company Projections for 2014–2016 (CBI)'', memorandum from Dallas Burkholder to EPA Air Docket EPA–HQ–OAR–2015–0111.

capacity and maintaining consistent production. After separating the companies into these two groups we then summed the low and high ends of each of the ranges for each individual company (or group of companies for CNG/LNG producers) within the group to calculate an aggregate projected production range for each group of companies. The ranges for each group of companies are shown in Tables IV.D–2 and IV.D–3 below.

TABLE IV.D–2—2015 PRODUCTION RANGES FOR COMPANIES WITHOUT CONSISTENT COMMERCIAL SCALE PRODUCTION

[Million gallons]

	Low end of the range [a]	High end of the range [a]
Abengoa	0	12
CNG/LNG Producers (New Facilities)	0	37
CoolPlanet	0	0
DuPont	0	5
Edeniq	0	1
Ineos BIO	0	4
Poet	0	4
Total	0	63

[a] Rounded to the nearest million gallons.

TABLE IV.D–3—2015 PRODUCTION RANGES FOR COMPANIES WITH CONSISTENT COMMERCIAL SCALE PRODUCTION

[Million gallons]

	Low end of the range [a]	High end of the range [a]
CNG/LNG Producers (Currently generating RINs)	[b] X	88
Ensyn	[b] X	1
Quad County Corn Processors	[b] X	2
Total	[c] 49	91

[a] Rounded to the nearest million gallons.

[b] The low end of the range for each individual company is based on actual production volumes and is therefore withheld to protect information claimed to be confidential business information.

[c] This number includes all cellulosic biofuel and cellulosic diesel RINs generated in the previous 12 months, as well as all advanced biofuel RINs generated for CNG/LNG derived from biogas prior to August 18, 2014 and within the last 12 months.

Because the cellulosic biofuel industry is still in its infancy and it is therefore not possible to predict with any degree of certainty the precise production volume each individual company will achieve, we believe that it would not be appropriate to choose a specific value within the projected range for each individual company/source. We believe it is more appropriate to identify a specific value within the aggregated ranges from Tables IV.D–2 and IV.D–3 that best reflects the likely production volume for each group of companies. For companies that have not yet achieved consistent commercial-scale production (Table IV.D–2) we are proposing to use the 25th percentile of the projected production range. We believe this volume is appropriate as, in addition to the uncertainties listed above, there is also significant technology risk as these facilities attempt to operate their technologies at commercial scale. In the early years of the cellulosic biofuel industry several companies, including Cello Energy, Range Fuels, and KiOR experienced significant technical difficulties in scaling up their technologies and were able to produce little, if any, volumes of cellulosic biofuels. It is necessary to consider this history when projecting production volumes from companies who have not yet achieved consistent production at commercial scale.[121]

For the group of companies that have achieved consistent commercial-scale production (Table IV.D–3) we are proposing to use the mid-point (50th percentile) of the projected range. We believe that this point accounts for the uncertainty related to the scale-up of production from the volume produced in the previous 12 months (through March 2015) as well as other uncertainties related to the generation of RINs such as documenting that the fuel is used as transportation fuel, heating oil, or jet fuel. This is not to say that we anticipate that each of these facilities within each group will produce at the 25th or 50th percentile, but rather that as a group the 25th and 50th percentile, respectively, are realistic projections for each group of companies. We believe this methodology accounts for the fact that some individual company may be able to deliver the volume of cellulosic biofuel they expect and produce at or near the high end of the range, while others may experience difficulty transitioning to commercial production and produce closer to the low end of the range. The result of applying this methodology is shown in Table IV.D–4 below.

[121] While ''new'' CNG/LNG facilities may not face the same challenges related to start-up and scale-up there is still a significant amount of uncertainty related to RIN generation from facilities that have not yet begun generating RINs. RIN generation from these facilities may be delayed or reduced if they are unable to verify that all or a portion of the CNG/LNG they produce is used as transportation fuel, or if they decide to sell the CNG/LNG they produce into non-transportation markets. These uncertainties can significantly impact the number of RINs generated by a CNG/LNG producer, and we therefore believe that projecting projection from these ''new'' facilities at the 25th percentile of the range is appropriate.

TABLE IV.D–4—PROJECTED VOLUME OF CELLULOSIC BIOFUEL IN 2015 FOR MONTHS WITHOUT PRODUCTION DATA

[Million gallons] [a]

	Low end of the range [b]	High end of the range [b]	Percentile	Projected volume [b]
Companies without consistent commercial-scale production	0	63	25th	16
Companies with consistent commercial-scale production	49	91	50th	70
Total	N/A	N/A	N/A	86

[a] The projections in this table are for April 2015—December 2015. The low end of the range is equal to the number of RINs produced by the companies over the most recent 12 months for which data is available multiplied by a factor of 0.75 (since it is only a projection for 9 months of the year). The high end of the range is based on projected production for the final 9 months of 2015.

[b] Rounded to the nearest million gallons.

EPA anticipates that if the same methodology is used in future years that as cellulosic biofuel companies successfully achieve commercial scale production, application of this methodology will appropriately generate increasing volume projections, both for the individual companies and for the industry as a whole. This will happen in two ways. First, as companies successfully produce cellulosic biofuel the low end of the range (which is based on the most recent 12 months of production for which data is available) will increase. Second, we would use the 50th percentile value, rather than the 25th percentile, for all companies who have achieved consistent commercial-scale production. If merited by the available data, we will also consider using a higher (or lower) percentile for both new facilities and facilities that have already achieved consistent commercial-scale production. We will consider comments on this matter, and after establishing percentile values for use in this rulemaking we expect we will annually review the percentile values and adjust them as appropriate, taking into account the success of past projections, to ensure that our methodology produces a production projection that takes a neutral aim at accuracy. As new pathways for the production of cellulosic biofuel are approved, we will also consider volumes produced using these pathways in our projections.

The final step in projecting the potentially available volume of cellulosic biofuel in 2015 is to combine the volumes of cellulosic biofuel actually produced in months for which data is available with the projected production volumes for the remaining months of 2015. This is shown in Table IV.D–5 below. For 2015 we are proposing a cellulosic biofuel standard of 106 million gallons. We request comment on the methodology used to project cellulosic biofuel volumes in 2015, as well as the general methodology used to project future cellulosic biofuel production.

TABLE IV.D–5—PROJECTED AVAILABLE CELLULOSIC BIOFUEL IN 2015

	Million gallons
Cellulosic Biofuel Production (Jan. 2015–March 2015)	20
Projected Cellulosic Biofuel Production (April 2015–December 2015)	86
Projected Available Volume of Cellulosic Biofuel in 2015	106

E. Cellulosic Biofuel Volume for 2016

To project the volume of potentially available cellulosic biofuel in 2016 we are proposing to use a methodology very similar to the one proposed for projecting cellulosic biofuel production in 2015 for months in which actual production data was not available. For 2016 we separated the list of potential producers of cellulosic biofuel into two groups according to whether or not the facilities have already begun producing commercial-scale volumes of cellulosic biofuel or who are expected to do so by July 1, 2015 (See Table IV.E–1 and Table IV.E–2).[122] We next defined a range of likely production volumes for each group of potential cellulosic biofuel producers. The low end of the range for each group of producers is intended to reflect actual production data. Rather than simply use the most recent 12 months for which information is currently available for each company, however, we are proposing to project what that data will be at the time of our final rule. We used zero as the low end of the aggregated projected production range for 2016 for facilities expected to begin producing fuel after July 1, 2015 (Table IV.E–1). We used our projected production volume for 2015 (106 million gallons) as the low end of the aggregated range for facilities expected to be producing commercial-scale volumes of cellulosic biofuel on or before July 1, 2015 (Table IV.E–2). This is consistent with the approach we used to project volumes for 2015 where we set the low end of the range for each group of companies at the volume produced over the preceding 12 months, as we believe very little of the volume produced in 2015 will come from facilities starting up after July 1, 2015 and the vast majority of cellulosic biofuel production in 2016 will come from facilities that begin before this date. We also believe this will align our proposed rule more closely with the final rule than would be the case if we based our proposal only on the data from the most recent 12 months of data available to EPA at this time. For our final rule, we intend to update the low end of the projected production range for each company using data from the most recent 12 months for which data is available.

To calculate the high end of the projected production range for each group of companies we considered each company individually (with the exception of the CNG/LNG producers) and used the same methodology in 2016

[122] We are projecting that facilities that begin producing commercial-scale volumes by July 2015 will achieve consistent production by the end of 2015. This is consistent with the approach used to project volumes for 2015 where we separated companies into two groups based on whether or not they have achieved consistent commercial-scale production. For the final rule we intend to assess whether or not the facilities in our projected volumes have achieved consistent commercial-scale production and will re-categorize them as necessary.

as for the months in 2015 for which actual past production data was not available (this methodology is covered in further detail in Section IV.D above). The high end of the range for each company within each group was added together to calculate the high end of the projected production range for that group.

After defining likely production ranges for each group of companies we projected a likely production volume from each group of companies for 2016. We projected a total production volume from the companies that we do not anticipate will begin commercial-scale production by July 1, 2015 using the 25th percentile of the projected production range (Table IV.E–1). For the companies that have already achieved consistent commercial-scale production or anticipate starting commercial-scale production by July 1, 2015, we used the 50th percentile of the aggregate projected production range (Table IV.E–2). This is consistent with the approach we used for projecting volumes in 2015, which is discussed in more detail in the preceding section. We intend to re-evaluate our categorization of the companies for the final rule using the most up to date information available.

TABLE IV.E–1—2016 PRODUCTION RANGES FOR COMPANIES WITH START-UP DATES AFTER JULY 1, 2015

[Million gallons]

	Low end of the range [a]	High end of the range [a]
CNG/LNG Producers (New Facilities)	0	120
CoolPlanet	0	0
DuPont	0	29
Edeniq	0	14
Poet	0	20
Aggregate Range	0	183
Projected Production (25th Percentile of Range)	46	

[a] Rounded to the nearest million gallons.

TABLE IV.E–2—2016 PRODUCTION RANGES FOR COMPANIES WITH CONSISTENT COMMERCIAL SCALE PRODUCTION OR START-UP DATES BEFORE JULY 1, 2015

[Million gallons]

	Low end of the range [a]	High end of the range [a]
Abengoa	N/A	19
CNG/LNG Producers (Existing Facilities)	N/A	185
Ensyn	N/A	3
Ineos BIO	N/A	6
Quad County Corn Processors	N/A	2
Aggregate Range	106	215
Projected Production (50th Percentile of Range)	161	

[a] Rounded to the nearest million gallons

The final step in projecting the potentially available volume of cellulosic biofuel in 2016 is to combine the volumes of cellulosic biofuel projected to be produced from each of the two groups discussed above (shown in Table IV.E–3 below). For 2016 we are proposing a cellulosic biofuel volume requirement of 204 million gallons. For our final rule we will use the most recent production data and company information available to update our projections. We request comment on the methodology and data used to project cellulosic biofuel volumes in 2016.

TABLE IV.E–3—PROJECTED VOLUME OF CELLULOSIC BIOFUEL IN 2016

[Million gallons]

	Low end of the range [a]	High end of the range [a]	Percentile	Projected volume [a]
Companies beginning production after July 1, 2015	0	183	25th	46
Companies beginning production before July 1, 2015	106	215	50th	161
Total	N/A	N/A	N/A	206

[a] Volumes rounded to the nearest million gallons.

F. Rescission of the 2011 Cellulosic Biofuel Standards

On January 25, 2013, the United States Court of Appeals for the District of Columbia Circuit issued its decision concerning a challenge to the 2012 cellulosic biofuel standard.[123] The Court found that in establishing the applicable volume of cellulosic biofuel for 2012, EPA had used a methodology in which ''the risk of overestimation [was] set deliberately to outweigh the risk of underestimation.'' The Court held EPA's

[123] *API* v. *EPA*, 706 F 3d 474 (D.C. Cir. January 25, 2013).

action to be inconsistent with the statute because EPA had failed to apply a ''neutral methodology'' aimed at providing a prediction of ''what will actually happen,'' as required by the statute. As a result of this ruling, the Court vacated the 2012 cellulosic biofuel standard, and we removed the 2012 requirement from the regulations in a previous action. Industry had also challenged the 2011 cellulosic biofuel standard by, first, filing a petition for reconsideration of that standard, and then seeking judicial review of our denial of the petition for reconsideration. This matter was still pending at the time of the DC Circuit's ruling on the 2012 cellulosic biofuel standard. Since we used essentially the same methodology to develop the 2011 cellulosic biofuel standard as we did to develop the 2012 standard, we requested, and the Court granted, a partial voluntary remand to enable us to reconsider our denial of the petition for reconsideration of the 2011 cellulosic biofuel standard. Given the Court's ruling that the methodology EPA used in developing the 2012 cellulosic biofuel standard was flawed, we are proposing to rescind the 2011 cellulosic biofuel applicable standard and refund the money paid by obligated parties to purchase cellulosic waiver credits to comply with the standard.

V. Percentage Standards

A. Background

The renewable fuel standards are expressed as volume percentages and are used by each obligated party to determine their Renewable Volume Obligations (RVO). Since there are four separate standards under the RFS program, there are likewise four separate RVOs applicable to each obligated party. Each standard applies to the sum of all gasoline and diesel produced or imported. The percentage standards are set so that if every obligated party meets the percentages, then the amount of renewable fuel, cellulosic biofuel, biomass-based diesel (BBD), and advanced biofuel used will meet the applicable volumes established in this rule on a nationwide basis.

Sections II, III, and IV provide our rationale and basis for the proposed volumes for advanced biofuel and total renewable fuel, BBD, and cellulosic biofuel, respectively. The volumes to be used to determine the four proposed percentage standards are shown in Table V.A–1.

TABLE V.A–1—PROPOSED VOLUMES FOR USE IN SETTING THE APPLICABLE PERCENTAGE STANDARDS

	2014	2015	2016
Cellulosic biofuel (million gallons)	33	106	206
Biomass-based diesel (billion gallons)[a]	1.63	1.70	1.80
Advanced biofuel (billion gallons)	2.68	2.90	3.40
Renewable fuel (billion gallons)	15.93	16.30	17.40

[a] Represents physical volume.

B. Calculation of Standards

1. How Are the Standards Calculated?

The following formulas are used to calculate the four percentage standards applicable to producers and importers of gasoline and diesel (see 40 CFR 80.1405):

$$Std_{CB,\,i} = 100\% \times \frac{RFV_{CB,\,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{BBD,\,i} = 100\% \times \frac{RFV_{BBD,\,i} \times 1.5}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{AB,\,i} = 100\% \times \frac{RFV_{AB,\,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

$$Std_{RF,\,i} = 100\% \times \frac{RFV_{RF,\,i}}{(G_i - RG_i) + (GS_i - RGS_i) - GE_i + (D_i - RD_i) + (DS_i - RDS_i) - DE_i}$$

Where:

$Std_{CB,i}$ = The cellulosic biofuel standard for year i, in percent.

$Std_{BBD,i}$ = The biomass-based diesel standard (ethanol-equivalent basis) for year i, in percent.

$Std_{AB,i}$ = The advanced biofuel standard for year i, in percent.

$Std_{RF,i}$ = The renewable fuel standard for year i, in percent.
$RFV_{CB,i}$ = Annual volume of cellulosic biofuel required by section 211(o) of the Clean Air Act for year i, in gallons.
$RFV_{BBD,i}$ = Annual volume of biomass-based diesel required by section 211(o) of the Clean Air Act for year i, in gallons.
$RFV_{AB,i}$ = Annual volume of advanced biofuel required by section 211(o) of the Clean Air Act for year i, in gallons.
$RFV_{RF,i}$ = Annual volume of renewable fuel required by section 211(o) of the Clean Air Act for year i, in gallons.
G_i = Amount of gasoline projected to be used in the 48 contiguous states and Hawaii, in year i, in gallons.
D_i = Amount of diesel projected to be used in the 48 contiguous states and Hawaii, in year i, in gallons. This value excludes diesel used in ocean-going vessels.
RG_i = Amount of renewable fuel blended into gasoline that is projected to be consumed in the 48 contiguous states and Hawaii, in year i, in gallons.
RD_i = Amount of renewable fuel blended into diesel that is projected to be consumed in the 48 contiguous states and Hawaii, in year i, in gallons.
GS_i = Amount of gasoline projected to be used in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.
RGS_i = Amount of renewable fuel blended into gasoline that is projected to be consumed in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.
DS_i = Amount of diesel projected to be used in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.
RDS_i = Amount of renewable fuel blended into diesel that is projected to be consumed in Alaska or a U.S. territory in year i if the state or territory opts-in, in gallons.
GE_i = Amount of gasoline projected to be produced by exempt small refineries and small refiners in year i, in gallons, in any year they are exempt per §§ 80.1441 and 80.1442, respectively.
DE_i = Amount of diesel projected to be produced by exempt small refineries and small refiners in year i, in gallons, in any year they are exempt per §§ 80.1441 and 80.1442, respectively.

The formulas used in deriving the annual percentage standards rely on estimates of the volumes of gasoline and diesel fuel, for both highway and nonroad uses, that are projected to be used in the year in which the standards will apply.[124] The projected gasoline and diesel volumes obtained from EIA include ethanol and biodiesel used in transportation fuel, which are subtracted out as indicated in the equations above. Production of other transportation fuels, such as natural gas, propane, and electricity from fossil fuels, is not currently subject to the standards, and volumes of such fuels are not used in calculating the annual standards. Since under the regulations the standards apply only to producers and importers of gasoline and diesel, these are the transportation fuels used to set the standards, as well as to determine the annual volume obligations of an individual gasoline or diesel producer or importer.

2. Small Refineries and Small Refiners

In CAA section 211(o)(9), enacted as part of the Energy Policy Act of 2005, Congress provided a temporary exemption to small refineries [125] through December 31, 2010. Congress provided that small refineries could receive a temporary extension of the exemption beyond 2010 based on an EPA determination of disproportionate economic hardship on a case-by-case basis in response to refiner petitions. EPA has granted some exemptions pursuant to this process in the past, and has granted exemptions for three small refineries for 2014. The proposed applicable percentage standards for 2014 reflect the fact that the gasoline and diesel volumes associated with these three small refineries has been exempted. However, at this time, no exemptions have been approved for 2015 or 2016, and we have calculated the percentage standards for these years without a small refinery/small refiner adjustment. Any requests for exemptions for 2014, 2015 or 2016 that are approved prior to the final rule will be reflected in the relevant standards in the final rule, as provided in the formulas described in the preceding section. Any requests for exemption that are approved after the release of the final 2014, 2015, and 2016 standards will not affect those standards.

3. Proposed Standards

As specified in the RFS2 proposed rule,[126] the percentage standards are based on energy-equivalent gallons of renewable fuel, with the cellulosic biofuel, advanced biofuel, and total renewable fuel standards based on ethanol equivalence and the BBD standard based on biodiesel equivalence. However, all RIN generation is based on ethanol-equivalence. For example, the RFS regulations provide that production or import of a gallon of qualifying biodiesel will lead to the generation of 1.5 RINs. In order to ensure that demand for the required physical volume of BBD will be created in each year, the calculation of the BBD standard provides that the applicable physical volume be multiplied by 1.5. The net result is a BBD gallon being worth 1.0 gallon toward the BBD standard, but worth 1.5 gallons toward the other standards.

The levels of the percentage standards would be reduced if Alaska or a U.S. territory chooses to participate in the RFS program, as gasoline and diesel produced in or imported into that state or territory would then be subject to the standard. Neither Alaska nor any U.S. territory has chosen to participate in the RFS program at this time, and thus the value of the related terms in the calculation of the standards is zero.

Note that because the gasoline and diesel volumes estimated by EIA include renewable fuel use, we must subtract the total renewable fuel volumes from the total gasoline and diesel volumes to get total non-renewable gasoline and diesel volumes. The values of the variables described above are shown in Table V.B.3–1.[127]

TABLE V.B.3–1—VALUES FOR TERMS IN CALCULATION OF THE PROPOSED STANDARDS [128]

[Billion gallons]

Term	2014	2015	2016
RFV_{CB}	0.033	0.106	0.206
RFV_{BBD}	[a] 1.67	1.70	1.80
RFV_{AB}	2.68	2.90	3.40
RFV_{RF}	15.93	16.30	17.40
G	136.49	138.37	137.58
D	55.21	56.77	58.13

[124] Monthly values from EIA's May 2015 Short-Term Energy Outlook (STEO) were used to project gasoline and diesel volumes for this proposal.

[126] 75 FR 14716, March 26, 2010.

[127] To determine the 49-state values for gasoline and diesel, the amounts of these fuels used in Alaska is subtracted from the totals provided by DOE. The Alaska fractions are determined from the June 27, 2014 EIA State Energy Data System (SEDS), Energy Consumption Estimates.

TABLE V.B.3–1—VALUES FOR TERMS IN CALCULATION OF THE PROPOSED STANDARDS [128]—Continued

[Billion gallons]

Term	2014	2015	2016
RG	13.43	13.36	13.46
RD	1.54	1.44	1.53
GS	0	0	0
RGS	0	0	0
DS	0	0	0
RDS	0	0	0
GE	0.01	0.00	0.00
DE	0.04	0.00	0.00

[a] Represents the biodiesel-equivalent volume of actual 2014 supply, which was 2.50 bill D4 RINs. Actual physical volume was 1.63 billion physical gallons, composed of 1.35 bill gal of biodiesel and 0.28 bill gal renewable diesel.

Although the Act specifies that EIA provide EPA with gasoline and diesel demand for the following year ''no later than October 31'', we believe it is appropriate to use EIA demand projections that are more recent than October 31 for a given year when such projections are available.[129] For this proposed rule, we have used gasoline, diesel, and renewable fuel consumption estimates available in the most recent version of EIA's Short-Term Energy Outlook. For the final rule we will use projections provided by EIA as required by the statute.

Using the volumes shown in Table V.B.3–1, we have calculated the proposed percentage standards for 2014, 2015, and 2016 as shown in Table V.B.3–2.

TABLE V.B.3–2—PROPOSED PERCENTAGE STANDARDS

	2014 (%)	2015 (%)	2016 (%)
Cellulosic biofuel	0.019	0.059	0.114
Biomass-based diesel	1.42	[a] 1.41	1.49
Advanced biofuel	1.52	1.61	1.88
Renewable fuel	9.02	9.04	9.63

[a] Although the proposed BBD volume requirement for 2015 is higher than it is for 2014, projected volumes of gasoline and diesel are also higher in 2015 than they were for 2014. The result is that the percentage standard, rounded to two decimal places, is the same for both years.

VI. Proposed Amendments to Regulations

We are proposing several revisions to the RFS regulations, which are described below. The first proposed revision relates to the definition of terms in Table 1 to 40 CFR 80.1426, which describes approved biofuel production pathways. The second set of revisions would address annual compliance reporting and associated attest reporting deadlines. We request comment on all aspects of these proposed amendments.

A. Proposed Changes to the Algal Biofuel Pathways

In the March 2010 RFS rule (75 FR 14670), EPA established two pathways for biofuels derived from algae to generate D-Code 4 (Biomass-Based Diesel) or 5 (Advanced) RINs. The pathways approved in the March 2010 RFS rule assumed that algae would be grown photosynthetically (i.e., using predominantly sunlight and CO2 as inputs) and harvested for their oil.[130] Biofuel produced with algae grown through other means is likely to have different lifecycle GHG emissions impacts. The EPA has recently received an inquiry regarding production of biofuel from algae grown non-photosynthetically, and we believe it would be appropriate to clarify that the algal oil pathways adopted as part of the March 2010 RFS rule do not apply to such algae. Therefore, we are proposing to replace ''algal oil'' as a feedstock in Table 1 to 40 CFR 80.1426 with ''oil from algae grown photosynthetically.'' We are also proposing to add a new definition for ''algae grown photosynthetically'' to 40 CFR 80.1401. We do not anticipate this definition will impact current renewable fuel production under the existing pathway. Companies wishing to produce biofuels from algae grown with a non-photosynthetic stage of growth must apply to EPA for approval of their pathway pursuant to 40 CFR 80.1416. We invite comment on these proposed changes.[131]

We also note that any companies wishing to produce fuel using genetically modified algae must conform to all other appropriate EPA regulations. For example, EPA's Office of Pollution Prevention and Toxics (OPPT) Biotechnology Program regulates the use of new genetically-engineered microorganisms (including bacteria, fungi, algae, viruses, protozoa, etc.) that are used in the production of biofuels under Section 5 of the Toxic Substances Control Act (TSCA).[132]

B. Annual Compliance Reporting and Attest Engagement Deadlines Under the RFS Program

The RFS regulations establish deadlines for parties with renewable volume obligations (obligated parties and renewable fuel exporters) to submit

[128] Details of volumes and calculations are available in the docket.

[129] The use of post-October 31 data for previous years was addressed in our 2013 Cellulosic Biofuel Standard rulemaking.[129] As stated in that rulemaking, ''. . . we believe it is appropriate to rely on EIA's most recent reports of actual gasoline and diesel consumption . . . Doing so allows a more accurate assessment of a percentage standard that will help to ensure that the volume of cellulosic biofuel we have determined should be used for compliance . . . will in fact be required.''

[130] See 75 FR 14696 (March 26, 2010).

[131] EPA is not proposing a regulartory definition of ''algae.'' Any comments related to the definition of ''algae'' will be considered beyond the scope of this rulemaking.

[132] Microbial Products of Biotechnology; Final Regulation Under the Toxic Substance Control Act; Final Rule. 62 FR 17910 (April 11, 1997).

annual compliance demonstration reports to the EPA, and later deadlines for the same parties to submit associated attest engagement reports. A number of other regulated parties, including RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, other parties owning RINs and 3rd party auditors, are also required to submit annual attest engagement reports according to a schedule specified in the regulations. As a result of the delay in issuing the RFS annual rules for 2014 and 2015, the EPA is proposing to amend certain reporting deadlines applicable to the 2013, 2014 and 2015 compliance years.

1. Obligated Parties and Renewable Fuel Exporters

a. Background.

Under existing RFS regulations (40 CFR 80.1451(a) and 80.1464(d)), obligated parties and renewable fuel exporters must submit compliance demonstration reports for each calendar year by March 31 of the following year, and associated attest engagements by June 1 of the following year. The EPA has recognized that it is important for obligated parties preparing a compliance demonstration report for a given calendar year to have an understanding of their RFS obligations for the next compliance year.[133] Therefore, in light of the delay in issuing the 2014 RFS annual standards, the EPA previously amended the regulations to provide that the annual compliance demonstration reports for obligated parties and exporters for the 2013 compliance year would not be due until 30 days after publication in the **Federal Register** of the 2014 RFS percentage standards. 40 CFR 80.1451(a)(1)(xiv). Similarly, the EPA extended the deadline for attest engagement reports for 2013 compliance demonstrations to 90 days after publication in the **Federal Register** of the 2014 RFS percentage standards. 40 CFR 80.1464(g). Because the EPA has not yet issued the 2014 RFS standards, 2013 compliance demonstration reports and associated attest engagement reports from obligated parties and renewable fuel exporters are not yet due.

Although the EPA has not yet issued a final 2014 RFS annual rule, and the generally-applicable March 31 deadline for compliance demonstration reports for the 2014 compliance year has now passed, the EPA has not adopted amendments to the regulations applicable to 2014 compliance demonstration and attest engagement reporting as it did with respect to the 2013 compliance year. Instead the EPA issued an Enviroflash on March 17, 2015 to clarify that obligated parties are not required to submit compliance demonstration reports or associated attest engagements for the 2014 compliance year until the EPA issues a final rule establishing the final 2014 RFS standards and sets (in that action) deadlines for 2014 compliance demonstrations and associated attest engagements for obligated parties. We noted in the Enviroflash our interpretation of the current regulatory deadlines as being inoperative for obligated parties for the 2014 compliance year because final 2014 RFS standards have not been established and it is therefore impossible for obligated parties to assess and demonstrate their compliance with the applicable standards. However, in that same Enviroflash we clarified that the situation is different for exporters of renewable fuel. Exporter renewable volume obligations are based on renewable fuel export volume, not on the RFS percentage standards. Therefore we stated in the Enviroflash that renewable fuel exporters must comply with the operative deadlines in the regulations for 2014 reporting, although precise obligations may differ depending on the portion of the year during which exports occurred, in light of regulatory amendments related to the deadline for exporter RIN retirements that were adopted in the July 18, 2014 RFS Quality Assurance Plan rule.[134] The details are explained in the March 17 Enviroflash.

b. Proposal.

The Agency now believes that setting a firm calendar date for 2013 compliance and attest engagement reports is preferable to the current approach of tying the deadlines for 2013 reporting to the date of publication of the 2014 annual rule in the **Federal Register**. The EPA seeks to establish reporting deadlines for three calendar years, and establishing firm deadlines for 2013 reporting will allow the EPA to sequence and time reports for subsequent years in a reasonable manner that reduces uncertainty.

i. Obligated Parties

We are proposing that compliance demonstration reports for obligated parties be submitted no later than January 31, 2016 for the 2013 compliance year, June 1, 2016 for the 2014 compliance year, and December 1, 2016 for the 2015 compliance year. Associated attest engagement reports would be due no later than June 1, 2016 for the 2013 compliance year, December 1, 2016 for the 2014 compliance year, and June 1, 2017 for the 2015 compliance year. We believe that this sequencing of reports, and the time allowed between them will allow obligated parties to proceed in a logical and orderly fashion to submit required reports, with sufficient intervening time so as not to pose an unreasonable burden.

ii. Exporters

For exporters of renewable fuel, we are proposing the same amendments to 2013 compliance year reporting deadlines as for obligated parties—annual compliance demonstration reports would be due no later than January 31, 2016, and associated attest engagement reports would be due no later than June 1, 2016. For 2014, the issue is more complex. For the 2014 compliance period from January 1, 2014 through September 16, 2014, partial annual compliance reports containing an exporter's name, registration number, and renewable volume obligation (ERVO) for that period were required to be submitted no later than March 31, 2015 as currently proscribed in the regulations under § 80.1451(a)(1).[135] For the 2014 compliance period from January 1, 2014 through September 16, 2014, we are proposing that full annual compliance reports containing an exporter's name, registration number, ERVO, as well as RINs retired to satisfy the ERVO and any cellulosic waiver credits used for that period be submitted no later than January 31, 2016, and that associated attest engagements be due no later than June 1, 2016. For the 2015 compliance year, full compliance reports will be due on March 31, 2016, as required by existing § 80.1451(a)(1), and associated attest engagements will be due by June 1, 2016 as required by § 80.1464(d).

2. Other Parties

a. Background

Following issuance of the March 17, 2015 Enviroflash to address reporting deadlines for obligated parties and renewable fuel exporters for the 2014 compliance year, the Agency received comments from attest engagement

[133] 78 FR 49823, August 15, 2013.

[134] 79 FR 42078.

[135] We are not amending the regulations as they pertain to exporters of renewable fuel for the 2014 compliance period from September 17, 2014 through December 31, 2014. We reiterate that under current regulations at § 80.145l(a)(1), reports containing an exporter's name, registration number, ERVO, as well as RINs retired to satisfy the ERVO and any cellulosic waiver credits used for that period were due March 31, 2015.

auditors concerning the June 1, 2015 attest engagement deadline for RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, other parties holding RINs, and independent third-party auditors. The auditors stated that it is impractical for them to perform the 2014 compliance year attestations before completing the 2013 compliance year attestations. The auditors explained that they generally rely on the beginning balance of RINs based on attest procedures performed in the previous year. They asserted that if they have not attested to the ending balance of RINs for the 2013 compliance year, they cannot effectively attest to the beginning balance of RINs for the 2014 compliance year.

The auditors also cited other reasons for why the 2013 and 2014 compliance year attestations should be revised. The auditors stated that there is confusion and uncertainty in industry about whether the June 1, 2015 deadline still applies to RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, other parties holding RINs, and independent third-party auditors because they were not explicitly mentioned in the March 17, 2015 Enviroflash and because the Agency previously issued a broader attest extension related to reporting deadlines for the 2013 compliance year and thus, any subsequent communication by the Agency would be expected to address all regulated parties. Since many parties have not yet completed their 2013 compliance year attestations because they are not required to do so, they do not have any expectation that the attestations for the 2014 compliance year are due June 1, 2015.

In 2014, the EPA changed the annual reporting deadline for all 40 CFR part 80 fuel programs from February 28 to March 31 and the attest deadline from May 31 to June 1. This is the first year that these new deadlines are in effect. The effects of the shorter time period between the annual reporting deadline and the deadline for attest engagement reports are exacerbated this year by the confusion surrounding the June 1, 2015 attest reporting deadline for RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, other parties holding RINs, and independent third-party auditors. Auditors need a reasonable amount of time to plan and execute any type of assurance engagement. The planning phase involves the evaluation of independence, execution of engagement letters, and scheduling of resources.

In light of the confusion surrounding the reporting deadlines for the 2014 compliance year for RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, other parties holding RINs, and independent third-party auditors, the EPA's Assistant Administrator for Air and Radiation sought a no action assurance from the Assistant Administrator for the Office of Enforcement and Compliance Assurance regarding enforcement of the 2014 reporting deadlines for these parties. In response, the Office of Enforcement and Compliance Assurance issued a conditional no action assurance on May 21, 2015 that provides, in part, as follows:

> the EPA will exercise its enforcement discretion not to pursue enforcement actions against a RIN-generating renewable fuel producer (domestic and foreign), a RIN-generating importer, any other party owning RINs, and an independent third-party auditor solely for violations of the 2014 attest engagement reporting deadline at 40 CFR §§ 80.1464(d). This No Action Assurance does not apply to the June 1, 2015 deadline for exporters of fuel to submit their reports for the 2014 compliance year, nor does it extend to any other RFS-related requirement.[136] Furthermore, as applied to an individual regulated party, this No Action Assurance is conditioned upon the regulated party complying with all other RFS requirements applicable to it. This No Action Assurance will remain in effect until either (1) 11:59 p.m. EST, January 30, 2016, or (2) the effective date of a final rule addressing the 2014 attest engagement deadlines, whichever occurs earlier.

b. Proposal

In this action, we are proposing a new attest engagement reporting deadline for the 2013 compliance period for RIN-generating renewable fuel producers, RIN-generating renewable fuel importers, and other parties owning RINs of no later than January 31, 2016. Additionally, we are proposing the same attest engagement reporting deadline of January 31, 2016 for these parties and for independent third-party auditors for the 2014 compliance year.[137] With respect to the 2015 compliance year, the EPA is not proposing to amend the current regulations; attest engagement reports for these parties for the 2015 compliance year are due on June 1, 2016.

Given the many different reporting schedules across the 2013, 2014, and 2015 compliance years that the Agency is proposing for obligated parties, exporters, RIN generating renewable fuel producers and importers, independent third-party auditors, and other parties owning RINs, and the multiple considerations the Agency is trying to balance across regulated parties, we seek comment on whether the proposed deadlines are appropriate and for whether there are other specific considerations that the Agency should evaluate when establishing the 2013, 2014, and 2015 annual compliance and attest engagement reporting deadlines.

VII. Public Participation

We request comment on all aspects of this proposal. This section describes how you can participate in this process.

A. How do I submit comments?

We are opening a formal comment period by publishing this document. We will accept comments during the period indicated under the **DATES** section. If you have an interest in the proposed standards, we encourage you to comment on any aspect of this rulemaking. We also request comment on specific topics identified throughout this proposal.

Your comments will be most useful if you include appropriate and detailed supporting rationale, data, and analysis. Commenters are especially encouraged to provide specific suggestions for any changes that they believe need to be made. You should send all comments, except those containing proprietary information, to our Air Docket (see **ADDRESSES** section) by the end of the comment period.

You may submit comments electronically, by mail, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your comment. Please ensure that your comments are submitted within the specified comment period. Comments

[136] The EPA provided guidance regarding the 2014 attest engagement reporting deadlines for renewable fuel exporters in its March 17, 2015 Enviroflash.

[137] Regarding independent third-party auditors, we permitted some independent third-party auditors to begin compliance with the final RFS Quality Assurance Program requirements before the January 1, 2015 effective date for the Q–RIN program. These independent third-party auditors were allowed to participate in the Q–RIN program beginning September 16, 2014 and would have been required to report RIN verification activities to the EPA by March 31, 2015. Since the information collection request was not approved prior to the March 31, 2015 deadline, the EPA has allowed independent third-party auditors that adopted the Q–RIN program early to report RIN verification activities to the EPA with the first quarter 2015 reports due June 1, 2015. Therefore, since independent third-party auditor annual attest requirements are dependent upon the submission of the RIN verification reports to the EPA, the EPA is proposing that for independent third-party auditors, for the 2014 compliance year, the attest engagement reporting deadline be no later than January 31, 2016.

received after the close of the comment period will be marked ''late.'' EPA is not required to consider these late comments. If you wish to submit Confidential Business Information (CBI) or information that is otherwise protected by statute, please follow the instructions in Section VII.B below.

B. How should I submit CBI to the Agency?

Do not submit information that you consider to be CBI electronically through the electronic public docket, *www.regulations.gov,* or by email. Send or deliver information identified as CBI only to the following address: U.S. Environmental Protection Agency, Assessment and Standards Division, 2000 Traverwood Drive, Ann Arbor, MI, 48105, Attention Docket ID EPA–HQ–OAR–2013–0479. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD ROM, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

In addition to one complete version of the comments that include any information claimed as CBI, a copy of the comments that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. This non-CBI version of your comments may be submitted electronically, by mail, or through hand delivery/courier. If you submit the copy that does not contain CBI on disk or CD ROM, mark the outside of the disk or CD ROM clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket without prior notice. If you have any questions about CBI or the procedures for claiming CBI, please consult the person identified in the **FOR FURTHER INFORMATION CONTACT** section.

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is an economically significant regulatory action that was submitted to the Office of Management and Budget (OMB) for review. Any changes made in response to OMB recommendations have been documented in the docket. The EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is presented in Sections II.G and III.E of this preamble.

B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control numbers 2060–0637 and 2060–0640. The proposed standards would not impose new or different reporting requirements on regulated parties than already exist for the RFS program.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden, or otherwise has a positive economic effect on the small entities subject to the rule. The small entities directly regulated by the RFS program are small refiners, which are defined at 13 CFR 121.201 as refiners with 1,500 employees or less company-wide.

EPA has conducted a screening analysis to assess whether it should make a finding that there would be no significant economic impact on a substantial number of small entities. We discuss this analysis below. The impacts of the RFS program on small entities were already addressed in the March 26, 2010 RFS2 rulemaking (75 FR 14670), which was a rule that implemented the entire program required by the Energy Independence and Security Act of 2007 (EISA 2007). As such, the Small Business Regulatory Enforcement Fairness Act (SBREFA) panel process that took place prior to the 2010 rule was also for the entire RFS program and looked at impacts on small refiners through 2022.

For the SBREFA process for the March 26, 2010 RFS2 rulemaking, EPA conducted outreach, fact-finding, and analysis of the potential impacts of the program on small refiners which are all described in the Final Regulatory Flexibility Analysis, located in the rulemaking docket (EPA–HQ–OAR–2005–0161). This analysis looked at impacts to all refiners, including small refiners, through the year 2022 and found that the program would not have a significant economic impact on a substantial number of small entities, and that this impact was expected to decrease over time, even as the standards increased. The analysis included a cost-to-sales ratio test, a ratio of the estimated annualized compliance costs to the value of sales per company, for gasoline and/or diesel small refiners subject to the standards. From this test, it was estimated that all small entities would have compliance costs that are less than one percent of their sales over the life of the program (75 FR 14862).

This proposed rule would not impose any additional requirements on small entities beyond those already analyzed, since the impacts of this proposed rule are not greater or fundamentally different than those already considered in the analysis for the March 26, 2010 rule assuming full implementation of the RFS program. As shown above in Tables I.A–1 and I.A–3 (and discussed further in Sections II and IV), this rule proposes to establish the 2014, 2015, and 2016 volume requirements for cellulosic biofuel, advanced biofuel, and total renewable fuel at levels significantly below the statutory volume targets. This exercise of EPA's waiver authorities reduces burdens on small entities, as compared to the burdens that would be imposed under the volumes specified in the Clean Air Act in the absence of waivers. Regarding the biomass-based diesel standard, we are proposing to increase the volume requirements for 2014–2016 over the statutory minimum value of 1 billion gallons. However, this is a nested standard within the advanced biofuel category, for which we are proposing significant reductions from the statutory volume targets. As discussed in Section III, we are setting the biomass-based diesel volume requirement at a level below what is anticipated will be produced and used to satisfy the reduced advanced biofuel requirement. The net result of our proposed actions are a reduction in burden as compared to implementation of the statutory volume targets, as was assumed in the March 26, 2010 analysis. Furthermore, available information shows that the impact on small entities from implementation of this rule will not be significant. Using the maximum values of the illustrative costs discussed in Section II.F., the gasoline and diesel fuel volume projections in Table V.B.3–1, and current wholesale fuel prices, a simple cost-to-sales ratio test shows that the costs to small entities of the RFS standards remain less than 1% of the value of their sales.

The program also includes compliance flexibilities that can reduce impacts on small entities. These flexibilities include RIN trading, 20%

RIN rollover allowance (up to 20% of an obligated party's RVO can be met using previous-year RINs), and deficit carryforward (the ability to carry over a deficit from a given year into the following year, providing that the deficit is satisfied together with the next year's RVO). In the March 26, 2010 final rule, we discussed other potential small entity flexibilities that had been suggested by the SBREFA panel or through comments, but we did not adopt them since they are inconsistent with EPA's authority under the CAA (see 75 FR 14737). Our statutory authority to issue relief to small entities has not changed since that time. Additionally, as specified by the statute, the RFS regulations (at 40 CFR 80.1441(e)(2)) allow for a small refinery [138] to petition for case-by-case hardship relief.

Given that this proposed rule would not impose additional requirements on small entities, would decrease burden via a reduction in required volumes as compared to statutory volume targets, and would not change the compliance flexibilities currently offered to small entities under the RFS program, we have therefore concluded that this action would not have a significant impact on a substantial number of directly regulated small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action implements mandates specifically and explicitly set forth in CAA section 211(o) without the exercise of any policy discretion by the EPA.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This proposed rule will be implemented at the Federal level and affects transportation fuel refiners, blenders, marketers, distributors, importers, exporters, and renewable fuel producers and importers. Tribal governments would be affected only to the extent they produce, purchase, and use regulated fuels. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because it implements specific standards established by Congress in statutes (CAA section 211(o)).

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action simply proposes the annual standards for renewable fuel under the RFS program for 2014, 2015, and 2016.

I. National Technology Transfer and Advancement Act (NTTAA)

This rulemaking does not involve technical standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations, and Low-Income Populations

The EPA believes that this action will not have potential disproportionately high and adverse human health or environmental effects on minority, low-income, or indigenous populations. This proposed rule does not affect the level of protection provided to human health or the environment by applicable air quality standards. This action does not relax the control measures on sources regulated by the RFS regulations and therefore will not cause emissions increases from these sources.

IX. Statutory Authority

Statutory authority for this action comes from section 211 of the Clean Air Act, 42 U.S.C. 7545. Additional support for the procedural and compliance related aspects of this proposed rule come from sections 114, 208, and 301(a) of the Clean Air Act, 42 U.S.C. 7414, 7542, and 7601(a).

List of Subjects in 40 CFR Part 80

Environmental protection, Environmental protection, Administrative practice and procedure, Air pollution control, Diesel fuel, Fuel additives, Gasoline, Imports, Oil imports, Petroleum, Renewable fuel.

Dated: May 29, 2015.

Gina McCarthy,

Administrator.

For the reasons set forth in the preamble, EPA proposed to amend 40 CFR part 80 as follows:

PART 80—REGULATION OF FUELS AND FUEL ADDITIVES

■ 1. The authority citation for part 80 continues to read as follows:

Authority: 42 U.S.C. 7414, 7521, 7542, 7545, and 7601(a).

Subpart M—Renewable Fuel Standard

■ 2. Section 80.1401 is amended by adding in alphabetical order the definition for ''Algae grown photosynthetically'' to read as follows:

§ 80.1401 Definitions.

* * * * *

Algae grown photosynthetically are algae that are grown such that their energy and carbon are predominantly derived from photosynthesis.

* * * * *

■ 3. Section 80.1405 is amended by:

■ a. Removing and reserving paragraph (a)(2)(i); and

■ b. Adding paragraphs (a)(5), (6), and (7).

The additions read as follows:

§ 80.1405 What are the Renewable Fuel Standards?

(a) * * *

(5) Renewable Fuel Standards for 2014.

(i) The value of the cellulosic biofuel standard for 2014 shall be 0.019 percent.

(ii) The value of the biomass-based diesel standard for 2014 shall be 1.42 percent.

(iii) The value of the advanced biofuel standard for 2014 shall be 1.52 percent.

(iv) The value of the renewable fuel standard for 2014 shall be 9.02 percent.

(6) Renewable Fuel Standards for 2015.

(i) The value of the cellulosic biofuel standard for 2015 shall be 0.059 percent.

(ii) The value of the biomass-based diesel standard for 2015 shall be 1.41 percent.

[138] A small refinery, as defined by the statute, is a refinery with an average daily crude throughput of 75,000 barrels or less. As this is a facility-based definition, not company-based as SBA's small refiner definition is, it follows that not all small refiners' facilities meet the definition of a small refinery.

(iii) The value of the advanced biofuel standard for 2015 shall be 1.61 percent.

(iv) The value of the renewable fuel standard for 2015 shall be 9.04 percent.

(7) Renewable Fuel Standards for 2016.

(i) The value of the cellulosic biofuel standard for 2016 shall be 0.114 percent.

(ii) The value of the biomass-based diesel standard for 2016 shall be 1.49 percent.

(iii) The value of the advanced biofuel standard for 2016 shall be 1.88 percent.

(iv) The value of the renewable fuel standard for 2016 shall be 9.63 percent.

* * * * *

■ 4. Section 80.1426, paragraph (f)(1) is amended by revising ''Table 1 to § 80.1426'', entries F and H to read as follows:

§ 80.1426 How are RINs generated and assigned to batches of renewable fuel by renewable fuel producers or importers?

* * * * *

(f) * * *

(1) * * *

TABLE 1 TO § 80.1426—APPLICABLE D CODES FOR EACH FUEL PATHWAY FOR USE IN GENERATING RINS

	Fuel type	Feedstock	Production process requirements	D-code
*	*	*	*	*
F	Biodiesel, renewable diesel, jet fuel and heating oil.	Soy bean oil; Oil from annual covercrops; Oil from algae grown photosynthetically; Biogenic waste oils/fats/greases; Non-food grade corn oil; Camelina sativa oil;	One of the following: Trans-Esterification. Hydrotreating. Excluding processes that co-process renewable biomass and petroleum.	4
*	*	*	*	*
H	Biodiesel, renewable diesel, jet fuel and heating oil.	Soy bean oil; Oil from annual covercrops; Oil from algae grown photosynthetically; Biogenic waste oils/fats/greases; Non-food grade corn oil; Camelina sativa oil;	One of the following: Trans-Esterification. Hydrotreating. Includes only processes that co-process renewable biomass and petroleum.	5
*	*	*	*	*

* * * * *

■ 5. Section 80.1451 is amended by revising paragraph (a)(1)(xiv) to read as follows:

§ 80.1451 What are the reporting requirements under the RFS program?

(a) * * *

(1) * * *

(xiv)(A) For the 2013 compliance year, annual compliance reports shall be submitted no later than January 31, 2016.

(B) For obligated parties, for the 2014 compliance year, annual compliance reports shall be submitted no later June 1, 2016.

(C) For exporters of renewable fuel, for the 2014 compliance period from January 1, 2014, through September 16, 2014, full annual compliance reports (containing the information specified in paragraphs (a)(1)(i), (ii), (vi), (viii), and (x) of this section) for that period shall be submitted no later than January 31, 2016.

(D) For obligated parties, for the 2015 compliance year, annual compliance reports shall be submitted no later than December 1, 2016.

* * * * *

■ 6. Section 80.1464 is amended by revising paragraph (g) and adding paragraph (i)(3) to read as follows.

§ 80.1464 What are the attest engagement requirements under the RFS program?

* * * * *

(g)(1) For obligated parties and exporters of renewable fuel, for the 2013 compliance year, reports required under this section shall be submitted to the EPA no later than June 1, 2016.

(2) For RIN-generating renewable fuel producers, RIN-generating importers of renewable fuel, and other parties owning RINs, for the 2013 compliance year, reports required under this section shall be submitted to the EPA no later than January 31, 2016.

(3) For obligated parties, for the 2014 compliance year, reports required under this section shall be submitted to the EPA no later than December 1, 2016.

(4) For exporters of renewable fuel, for the 2014 compliance period from January 1, 2014, through September 16, 2014, full reports for that period required under this section shall be submitted no later than June 1, 2016.

(5) For RIN-generating renewable fuel producers, RIN-generating importers of renewable fuel, and other parties owning RINs, for the 2014 compliance year, reports required under this section shall be submitted to the EPA no later than January 31, 2016.

(6) For obligated parties, for the 2015 compliance year, reports required under this section shall be submitted to the EPA no later than June 1, 2017.

* * * * *

(i) * * *

(3) Reporting requirements. For the 2014 compliance year, reports required under paragraph (i) of this section shall be submitted to the EPA no later than January 31, 2016. For the 2015 compliance year and each subsequent year, reports required under paragraph (i) of this section shall be submitted pursuant to paragraph (d) of this section.

[FR Doc. 2015–13956 Filed 6–9–15; 8:45 am]

BILLING CODE 6560–50–P