6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 80

[EPA-HQ-OAR-2015-0111; FRL-XXXX-XX-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: Final 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 establishes the 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 rescinding the cellulosic biofuel standard for 2011. Relying on statutory waiver authorities, the EPA is adjusting the applicable volumes of advanced biofuel and total renewable fuel for all three years. The 2016 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 renewable fuels. In this action, we are also establishing the applicable volume of biomass-based diesel for 2017. Finally, we are setting the compliance and attest reporting deadlines for the years 2013, 2014, and 2015, as well as finalizing regulatory amendments to clarify the scope of the existing algal biofuel pathway.

DATES: This final rule is effective on [**Insert date 60 days following the publication in the Federal Register**]

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2015-0111. All documents in the docket are listed on the http://www.regulations.gov web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed in the electronic docket and will be publicly available only in hard copy

form. Publicly available docket materials are available electronically through http://www.regulations.gov.

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 final 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 entity is 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] EISA's stated goals include moving the United States toward "greater energy independence and security, to increase the production of clean renewable fuels." Since the initial promulgation of the RFS program regulations in 2007, domestic production and use of renewable fuel in the U.S. has increased substantially. According to the Energy Information Administration (EIA), fuel ethanol production in the U.S. more than 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

[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 2015, Table 10.3.

billion gallons in 2007 to 1.46 billion gallons in 2014.[4] Today, nearly all of the approximately 139 billion gallons of gasoline used for transportation purposes contains 10 percent ethanol (E10).

The fundamental objective of the RFS provisions under the CAA is clear: to increase the use of renewable fuels in the U.S. transportation system every year through at least 2022 in order to reduce greenhouse gases (GHGs) and increase energy security. Further, renewable fuels from facilities that commenced construction after 2007 must be better performing in terms of their greenhouse gas emissions, as compared on a lifecycle basis, to the petroleum based fuels they are replacing. Cellulosic biofuels are required to have 60 percent or greater greenhouse gas (GHG) emissions benefits on a lifecycle basis than the petroleum based fuels they replace; advanced biofuels (including biomass-based diesel) must have a 50 percent or greater benefit; and conventional biofuels (other than grandfathered facilities) must have a 20 percent or better benefit. Increased use of renewable fuels means less use of fossil fuels, which generally results in lower GHG emissions over time, especially when 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. These lower GHG renewable fuels include corn starch ethanol, the predominant renewable fuel 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 in the statutory volume tables starting in 2015 while the advanced volumes continue to grow.[5]

The statute includes annual volume targets,[6] 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. In this action, EPA is establishing the 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. We are also establishing the applicable volume of biomass-based diesel for 2017.

In the June 10, 2015 notice of proposed rulemaking (NPRM), we proposed standards based on an approach that sought to achieve the Congressional intent of increasing renewable fuel use over time in order to address climate change and increase energy security, while at the same time accounting for the real-world challenges that have slowed progress toward such goals.[7] Those challenges have made the volume targets established by Congress for 2014, 2015, and 2016 beyond reach. In the NPRM we proposed to use waiver mechanisms that Congress provided to allow for the volume targets to be reduced if necessary. The proposed volume

[4] 2007 volume represents biodiesel only, from EIA's Monthly Energy Review, April 2015, Table 10.4. 2014 volume represents biodiesel and renewable diesel domestic production from EMTS.
[5] In this document we follow the common practice of using the term "conventional" renewable fuel to mean any renewable fuel that is not an advanced biofuel.
[6] CAA 211(o)(2)(B)
[7] See 80 FR 33100.

requirements were lower than the statutory targets but set at a level that we believed would spur growth in renewable fuel use, consistent with Congressional intent.

In this action, we are finalizing standards that make use of the statute's waiver provisions. The final standards differ from the proposed standards based on new information, consideration of public comments, and corrected calculations. Details of these changes are provided below. By finalizing the percentage standards for 2016 by November 30, 2015, we are returning to the statutory timeline for issuing standards under the RFS program.[8]

We received a substantial number of comments on our proposed use of the statute's waiver authorities, with commenters both supporting and opposing our approach. In addition to comments on our proposed use of waiver authorities, we received comments on multiple other areas of the proposal, including our proposed treatment of carryover RINs, our proposed approach to determining the volume requirements, and other areas. We address these comments in this preamble as well as in a response-to-comment (RTC) document, which can be found in the docket for this action.

While we are using the statutory waiver authorities in establishing final 2014, 2015, and 2016 standards for cellulosic biofuel, advanced biofuel, and total renewable fuel, as we proposed to do, the volumes we are finalizing differ from the proposed volumes in order to reflect updated and corrected information, and to provide year-to-year growth consistent with the statute's intent. Key corrections and updates include:

- Updating our assessment of volumes of renewable fuel that can be blended at various concentrations into petroleum fuel and our calculation of all of the percentage standards to take into account changes in EIA's projected gasoline and diesel demand for 2016.

- Correcting an error in determining actual volumes of ethanol supplied in 2014. EPA acknowledged this error in July 2015 by placing a memo in the docket.[9] Correcting the error leads to a higher 2014 total renewable fuel volume requirement than the level in the NPRM.

- Accounting for higher than expected supply of biodiesel and renewable diesel in 2015, providing a basis for expecting similar growth in biodiesel and renewable diesel volumes in 2016.

For 2016, we are finalizing volume requirements that are significantly higher than proposed, and that represent significant growth compared to actual renewable fuel use in 2015. While some stakeholders commented that reductions from the statutory targets would lead to a stagnation in growth, we disagree with this view. We proposed a 2016 volume requirement for total renewable fuel that was 1.1 billion gallons greater than the proposed 2015 volume

[8] We are also setting the BBD volume requirement for 2017 in this final rule. Under the statute, it was required to be set by November 1, 2015.
[9] See Docket Item No. EPA–HQ– OAR–2015–0111-1219.

requirement – a significant level of growth in one year. Our final 2016 volume requirements are also ambitious, with substantial growth in all four categories relative to 2015. We are also setting a final volume requirement for BBD for 2017 that continues the growth in that category of renewable fuel. The final volume requirements are shown in Table I-1 below.

Table I-1
Final Volume Requirements[a]

	2014	2015	2016	2017
Cellulosic biofuel (million gallons)	33	123	230	n/a
Biomass-based diesel (billion gallons)	1.63	1.73	1.90	2.00
Advanced biofuel (billion gallons)	2.67	2.88	3.61	n/a
Renewable fuel (billion gallons)	16.28	16.93	18.11	n/a

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

Our decision to finalize volumes for total renewable fuel that rely on exercising the general waiver authority is based on the same fundamental reasoning we relied upon in the June 10, 2015 proposal. Despite significant increases in renewable fuel use in the United States, real-world constraints, such as the slower than expected development of the cellulosic biofuel industry and constraints in the marketplace needed to supply certain biofuels to consumers, have made the timeline laid out by Congress impossible to achieve. These challenges remain, even as we recognize the success of the RFS program over the past decade in boosting renewable fuel use, and the recent signs of progress towards development of increasing volumes of advanced, low GHG-emitting fuels, including cellulosic biofuels.

We believe that the RFS program can and will drive renewable fuel use and, indeed, we have considered the ability of the market to respond to the standards we set when we assessed the amount of renewable fuel that can be supplied. Therefore, while this final rule applies the tools Congress provided to make adjustments to the statutory volume targets in recognition of the constraints that exist today, we believe the standards we are finalizing today will drive growth in renewable fuels, particularly advanced biofuels which achieve the lowest lifecycle GHG emissions. In our view, while Congress recognized that supply challenges may exist as evidenced by the waiver provisions, it did not intend growth in the renewable fuels market to be stopped by those challenges, including those associated with the "E10 blendwall."[10] 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 constraints in the market. The standards we are finalizing will provide those incentives.

The final volume requirements will push the fuels sector to produce and blend more renewable fuels in 2016 in a manner that is consistent with the goals Congress envisioned. The

[10] 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.

final volumes are less than the statutory targets for 2016 but higher than what the market would produce and use in the absence of such market-driving standards. The 2016 standards are expected to spur further progress in overcoming current challenges and lead to continued growth in the production and use of qualifying renewable fuels, including higher-level ethanol blends. In this regard the final standards are intended to fulfill the spirit and intent of Congress and provide guidance to market participants.

Various commenters in the biofuels industry disagreed with our assessment that the approach described in the NPRM, in which we proposed to reduce the statutory targets using the available waiver authorities, would nevertheless support growth in renewable fuels. We address these comments throughout this notice and the response to comments (RTC) document. We emphasize, however, that our fundamental goal is to implement the RFS program in such a way as to promote growth of renewable fuel use over time. We have conducted significant technical analysis, both in the proposed rule and in this final rule, to better understand and characterize the renewable fuels market and the RFS program, all in an effort to implement the program on a schedule that matches as nearly as possible that set forth in the statute.[11] We believe the approach taken in this final rule – in which we use the general waiver authority only to the extent necessary in light of real world constraints to make the requirements reasonably achievable, and we use the cellulosic waiver authority for advanced biofuel in a manner that allows advanced biofuel to significantly backfill for missing volumes of cellulosic biofuel – will achieve that goal.

The RFS program can be thought of as a market forcing policy. The objective of the program is to introduce increasing volumes of renewable fuels, with a focus on cellulosic and other advanced renewable fuels, into the marketplace. Congress made the decision that this is an appropriate policy objective, and put in place a program to achieve that policy goal. A key issue in implementing any program designed to advance new technologies and increase use of existing technologies, however, is the question of lead time. Technologies are typically phased in over time – in many cases over many years – to allow for the development of the technology and the steady growth in penetration of that technology into the marketplace. New technologies do not typically start at 90 or 100 percent penetration rates; they can take time to overcome investment, technical, and market hurdles to their development, deployment and use. The greater the number and type of these challenges, the longer the lead time must be to achieve the desired policy goal. In establishing the RFS program, Congress not only recognized that biofuels would need to phase in over time, and thus established a ramp-up of renewable fuel volume targets over time, but also established provisions in the law allowing EPA to waive in whole or in part implementation of those targets under certain circumstances. Our exercising of those waiver authorities is not an attempt to undermine program growth, as some commenters argue, but rather a recognition of real world constraints that necessitate an adaptive approach to managing the program. Growth will, and must, continue under the law, but Congress recognized that in

[11] See, for example, the supporting documents "A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects," "An Assessment of the Impact of RIN Prices on the Retail Price of E85," and "Correlating E85 consumption volumes with E85 price". These documents discuss the expected impacts of the price of RINs on the transportation fuels and renewable fuels marketplace, the potential for the RFS program to incentivize additional production and use of renewable fuels, and the observed impacts of the RFS on the fuels market over the past several years.

some cases, driving the introduction of a new technology requires an acknowledgment that new technologies can in some cases require longer lead times to achieve success. Trying to force growth at rates that prove infeasible would only undermine the certainty in the RFS program that is needed to sustain long-term growth.

As stated in the NPRM, this final rule 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 ethanol and biodiesel use and will require sustained growth in the development and use of advanced, non-ethanol renewable fuels, including drop-in renewable fuels. This final rule acknowledges this transition by finalizing volume requirements based not only on the volumes of renewable fuels that have already been achieved in 2014 and the months in 2015 leading up to this final action, but also on the volumes that can be supplied in 2016 as the market addresses infrastructure and other constraints. Our final rule 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, such as biodiesel and renewable diesel, than has occurred to date, depending on how the market responds to the standards we set. The standards we are finalizing are consistent with the purpose of the statute: to significantly increase the amount of renewable fuel used in the supply of transportation fuel over time, particularly renewable fuels with the lowest lifecycle GHG emissions.

Since the amount of renewable fuel that can be produced and imported is larger than the volume that can be consumed due to limited demand for transportation fuel and constraints on supply of renewable fuels to vehicles and engines, there is necessarily competition among biofuels for retail consumption in the United States. In setting the biomass-based diesel volume requirement we have worked to achieve an appropriate and reasonable balance between setting a volume requirement that would provide support for the established BBD industry, while also providing opportunities under the advanced biofuel volume requirement to incentivize continued development and production of emerging biofuels. The approach we have used to determine the final 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 market participants, including 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 over time 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, which produce the greatest reductions in GHGs. To this end, as discussed in Section III, we are finalizing specific volume requirements for biomass-based diesel (BBD) through 2017.

As indicated in the NPRM, in establishing the standards for 2014, we must acknowledge that the compliance year has passed and any standard EPA sets for 2014 can no longer influence renewable fuel production or use in that year. Therefore, we are issuing a final rule for 2014 that

reflects those volumes of renewable fuel that were actually supplied in 2014. Details regarding how we calculated the final "actual" volumes used in 2014 are discussed in Section II.C below.

With regard to 2015, the proposed volume requirements were based in part on actual volumes supplied in the first part of the year, and in part based on a determination of growth that was possible (and which could be incentivized through the NPRM) in the balance of the year. Actual data on supply after release of the June 10, 2015 NPRM indicates that the market responded to the NPRM by increasing supply in comparison to the period prior to the release of the NPRM. The final standards for 2015 have been set based on updated production and consumption data available as of issuance of this final rule, and a projection of what is expected to be produced and used through the end of 2015, taking into account the inability of the market to respond to this final action in light of the little time remaining in the year.

For 2016, our approach is to set final volumes that take into account both the constraints in the supplies that exist, and the ability of the RFS program to incentivize growth. Where appropriate we also take into consideration other factors such as the impact of the BBD standard on incentivizing the production and use of other advanced biofuels, and the benefits provided by advanced biofuels in backfilling some of the volume that Congress envisioned would be provided in 2016 by cellulosic biofuels.

This final rule represents EPA's commitment and continued support for steady growth in renewable fuel use. 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 of 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 has leveraged several billion dollars more in private support for development of advanced renewable fuels. USDA's Biofuel Infrastructure Partnership program will provide $100 million in grants for the expansion of renewable fuel infrastructure, and their 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 finalizing 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 total renewable fuel.

Table I.A-1
Applicable Volumes Specified in the Clean Air Act (billion 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 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 set forth in the statute 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. The individual volume obligations determine the number of RINs of each renewable fuel type that each obligated party must acquire and retire to demonstrate compliance.

Today EPA is establishing the 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 final 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[12]	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.

By re-proposing the 2014 standards along with a proposed rule for the 2015 and 2016 standards, we were not only able to formulate a proposed rule for public comment that takes into account the fact that 2014 is over, but we were also able to coordinate the treatment of 2014 with the treatment of 2015, where part of the year has likewise already passed. We therefore withdrew the November 29, 2013, NPRM,[13] and the June 10, 2015, NPRM replaced and superseded that earlier proposed rule. The timing of this final rule is being issued consistent with terms of a final consent decree entered into by the EPA on April 10, 2015. This consent decree resolves pending litigation concerning EPA's failure to establish standards for 2014 and 2015 by the statutory deadlines and includes a requirement for EPA to promulgate final standards for 2014 and 2015 by November 30, 2015.[14]

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 final rule, we present our analysis of cellulosic biofuel production and the final applicable volumes for 2014, 2015, and 2016. This analysis is based on an assessment of actual cellulosic biofuel supply in 2014 and parts of 2015, estimates from EIA, an evaluation of producers' production plans and progress to date following discussions with cellulosic biofuel producers, and review of comments we received in response to the NPRM.

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 review of the renewable fuels program, consultation with USDA and DOE as well as consideration of a number of factors. In Section III of this preamble we discuss our assessment of statutory and other relevant factors and our final volume requirements for BBD for 2014, 2015, 2016, and

[12] 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.
[13] See 78 FR 71732 (November 29, 2013) and 79 FR 73007 (December 9, 2014).
[14] See American Fuel and Petrochemical Manuf. et al v. EPA (No. 15-cv-394, D.D.C.). The consent decree also requires that EPA respond by November 30, 2015 to the plaintiffs' petition seeking a waiver in part of the 2014 statutory volume targets.

2017. We are finalizing growth in the required volume of BBD in such a way that both the BBD market and other advanced biofuels will grow.

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 refer to this as the "cellulosic waiver authority." 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 final rule describes our use of the cellulosic waiver authority to reduce volumes of advanced biofuel and total renewable fuel and the general waiver authority to further reduce volumes of total renewable fuel. Exercise of our waiver authorities is necessary to address important realities, including:

- 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 ability of the market to supply renewable fuels to the vehicles that can use them.

We believe these realities justify the exercise of the authorities Congress provided us to waive the statutory volumes. At the same time, we are mindful that the primary objective of the statute is to increase renewable fuel use over time. For the total renewable fuel requirement in this rule, we are using the waiver authorities only to the extent necessary to derive applicable volumes that reflect the maximum supply that can reasonably be expected to be produced and consumed by a market that is responsive to the RFS standards. 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 final total renewable fuel volume requirement is one that we believe necessarily involves considerable exercise of judgment. Based on our assessment of available renewable fuel supply, and after consultation with the Departments of Agriculture and Energy, we believe that adjustments to the statutory targets for total renewable fuel are warranted for 2014, 2015, and 2016. While the final volume requirements for 2014 and 2015 are either equal to actual supply or (for 2015) a projection from actual supply, the volume requirement for 2016 will lead to growth in supply beyond the levels achieved in the past, based on the expectation that the market can and will respond to the standards we set.

For the advanced biofuel volume requirements, we are using the cellulosic waiver authority to derive a volume requirement for 2014 that is based on actual supply; a volume

requirement for 2015 that is based on actual supply during months for which data are available, and a projection from those levels for the remaining months in the year; and a volume requirement for 2016 that is reasonably attainable and which to a significant extent will result in backfilling the shortfall in cellulosic biofuel volumes with other advanced biofuels that also provide substantial GHG emission reductions.[15]

B. Summary of Major Provisions in This Action

This section briefly summarizes the major provisions of this final rule. We are establishing 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. This action also includes a final response to several requests we received in 2013 for a waiver of the 2014 standards. We are also finalizing an amendment to the regulations designed to clarify the scope of the algal biofuel pathway. Finally, we are establishing new deadlines for annual compliance reporting and attest reporting for the 2013, 2014 and 2015 compliance years.

1. Final Approach to Setting Standards for 2014, 2015, and 2016

Because 2014 has passed, this 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 of renewable fuel in 2014. 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 final standards we set cannot affect the past. Therefore, in this action we are basing 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 Census Bureau, or retired for other purposes unrelated to demonstrating compliance with the annual standards as reported through EMTS.[16] 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 cost associated with the reallocation of 2014 RINs to those obligated parties that need them. However, such variations in RIN holdings between obligated parties 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 that were

[15] As discussed in Section II.B.1, 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.

[16] 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.

generated and are available for compliance. Rather, we believe that we should rely on the market to sort out the distribution of RINs among obligated parties as was the intent in establishing the RIN trading mechanism. We are revising the deadline for obligated parties to demonstrate compliance with the RFS standards to afford obligated parties additional time to engage in transactions to acquire the RINs they need for compliance.[17]

For the 2015 standards, we proposed volume requirements in the June 10, 2015 NPRM that projected growth in renewable fuel use over the calendar year, even though the proposed volume requirements were issued mid-way through the year. The market appears to have responded to the proposal as monthly supply after the NPRM was about 5% higher than monthly supply before the NPRM. We believe that the final rule, however, will be issued too late in the year to have any further effect on supply in 2015. Therefore, in deriving the final 2015 volume requirements we used the data on actual supply that is available to us (through September 2015), along with a projection of supply for the remaining months of 2015 based on actual supply in the months for which we have data and historical trends regarding seasonal renewable fuel supply. In other words, the 2015 volume requirements are based on a combination of actual volumes supplied and an extrapolation of likely volumes for the remainder of the year that assumes that our final standards are issued too late in the year to have further influence on the renewable fuel supply.

For 2016, our final volume requirements are issued on the statutory schedule, allowing the full compliance year for obligated parties and the market to react to the standards we set. Therefore, we assume that the standards can influence greater renewable fuel use than would be the case in the absence of the standards. For advanced biofuel and total renewable fuel, our assessment of 2016 supply simultaneously reflects the statute's purpose to drive growth in renewable fuels, while also accounting for constraints in the market that make the volume targets specified in the statute beyond reach, as described more fully in Section II. Our determination regarding the BBD volume requirement has been based on consultation with USDA and DOE and 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 cellulosic biofuel volume requirement is based on a projection of production in 2016 that reflects a neutral aim at accuracy.

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 determined that reductions in the statutory targets for advanced biofuel and total renewable fuel were not necessary. However, for 2014 and later years this is not the case. For 2014, this final rulemaking is too late to influence the market, and

[17] Other compliance flexibilities also exist, including use of carryover RINs and the ability for parties that do not have a 2013 compliance deficit to carry a 2014 deficit forward into 2015.

renewable fuel supply must necessarily be determined based on historical data. This is also largely the case for 2015, though we have included a projection for the latter part of the year for which data on actual use is not available. For both of these years, the supply of advanced and total renewable fuels was insufficient to satisfy the statutory targets.

For 2016 we have determined that the volume of ethanol in the form of E10 or higher ethanol blends that can be supplied to vehicles, together with the volume of non-ethanol renewable fuels that can be supplied to vehicles, is insufficient to attain the statutory targets for both total renewable fuel and advanced biofuel. As a result, we are using the waiver authorities provided in CAA 211(o)(7) to set lower volume requirements for these renewable fuel categories in 2016. We expect future standards to both reflect and anticipate progress of the industry and market in providing for continued expansion of the supply of renewable fuels.

Our determination in this final rule 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; the ability of available renewable fuels to be used as transportation fuel, heating oil, or jet fuel; and the ability of the standards to bring about market changes in the time available.[18] Increasing renewable fuel supply requires all aspects of the market to be in place to support those increased volumes. Yet the renewable fuel marketplace is very complex, and includes such diverse elements as feedstock (e.g. corn, soybeans) production and transport, renewable fuel production and import facilities, distribution capacity (e.g., pipeline, rail, barge, and tank truck), terminal storage, facilities at terminals to blend renewable fuel into gasoline and diesel, vehicles/engines designed to use renewable fuel, and consumer fuel consumption. Compounding this complexity is the fact that these elements are typically under the control of different entities, making coordinated investment decisions more difficult. A constraint anywhere in this system can lead to shortfalls in renewable fuel supply in comparison to the statutory targets. As described in more detail in Section II.B, 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 using the waiver authorities in a limited way that reflects our understanding of how to reconcile real marketplace constraints with Congress' intent to cause growth in renewable fuel use over time.

We have established applicable volumes for advanced biofuel and total renewable fuel for 2016 that would result in significant volume growth over the levels supplied in previous years. Moreover, the 2016 volume requirement for total renewable fuel is, in our judgment, as ambitious as can reasonably be justified, and reflects the growth rates that can be attained under a program explicitly designed to compel the market to respond. The advanced biofuel volume requirement is set at a level that will allow reasonably attainable volumes of advanced biofuel to backfill for missing cellulosic biofuel volumes.

[18] 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.

3. Biomass-Based Diesel

As for advanced and total renewable fuel in 2014 and 2015, we believe that it is appropriate to establish the 2014 and 2015 volume requirements of BBD to reflect actual supply (including a projection for the latter part of 2015 that is primarily based on supply in the earlier part of the year for which data is available). For 2016 and 2017, to preserve the important role that BBD plays in the RFS program, as well as to support the volume requirements for advanced biofuel, we believe that it is appropriate to increase the BBD volume requirement for each year. However, we also believe that it is of ongoing importance that opportunities for other types of advanced biofuel, such as renewable diesel co-processed with petroleum, renewable gasoline blendstocks, and renewable heating oil, as well as others that are under development be incentivized and expanded. 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 finalizing the 2014 and 2015 BBD volume requirement at the actual volumes of 1.63 and 1.73 billion gallons,[19] respectively, but we are also finalizing increases in the applicable volume of BBD to 1.9 and 2.0 billion gallons for years 2016 and 2017, respectively. We believe that these increases 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 growth in production of other types of advanced biofuel with comparable or potentially superior environmental or other attributes.

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. This volume included a significant number of cellulosic biofuel RINs generated for cellulosic CNG/LNG from biogas through a new pathway approved by EPA in 2014.[20] For 2014 we are finalizing 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 finalizing a cellulosic biofuel standard of 123 million ethanol-equivalent gallons for 2015 and 230 million ethanol-equivalent gallons in 2016 based on the information we have received regarding individual facilities' capacities, production start dates

[19] The 2015 BBD standard is based on actual data for the first 9 months of 2015 and a projection for the latter part of the year for which data on actual use is not available.
[20] See 79 FR 42128 (July 18, 2014).

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 will be made available in the U.S. in 2015 and 2016, we researched all potential production sources by company and facility. This included sources still in the planning stages, facilities under construction, facilities in the commissioning or start-up phases, and facilities already producing some volume of cellulosic biofuel. Facilities primarily focused on R&D 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. EPA also received a projection of liquid cellulosic biofuel production in 2016 from EIA, which helped form the basis of our production for these types of cellulosic biofuels. Further discussion of these factors and the way they were used to determine our final 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 producer 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 final percentage standards was provided by EIA. The final percentage 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
Final Percentage Standards

	2014	2015	2016
Cellulosic biofuel	0.019%	0.069%	0.128%
Biomass-based diesel	1.41%	1.49%	1.59%
Advanced biofuel	1.51%	1.62%	2.01%
Renewable fuel	9.19%	9.52%	10.10%

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

Concurrently with the November 29, 2013, proposed rule for 2014 RFS standards, we also published a separate Federal Register Notice[21] 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 eight Governors.[22]

The petitions generally asserted that for 2014 there is an inadequate domestic supply of renewable fuel and therefore RINs, due both to the E10 blendwall and constraints on the supply of higher-level ethanol blends, and of non-ethanol renewable fuels. Many 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. For total renewable fuel, cellulosic biofuel and advanced biofuels, this approach results in volume requirements as close to the statutory volume targets as possible absent using the availability of carryover RINs as a justification for setting higher requirements. We considered that option, but, as described in detail in Section II.H., we do not interpret carryover RINs to be part of the "supply" of renewable fuel for purposes of assessing whether an inadequate domestic supply exists to justify a waiver under Section 211(o)(7)(A) and, although they are a relevant consideration in determining whether or not we should exercise our discretion to grant a waiver under either the general waiver authority or the cellulosic waiver

[21] 78 FR 71732 (November 29, 2013) and 78 FR 71607 (November 19, 2013), respectively.
[22] EPA has received, to date, waiver petitions from Governors Deal (GA), Fallin (OK), Perry (TX), Otter (ID), LePage (ME), Martinez (NM), 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.

authority, we have determined that the current bank of carryover RINs serves important program functions, and that the requirements for 2014-2016 should not be intentionally set at levels that would require a draw-down in the current bank of carryover RINs. We also considered, given the late nature of this rulemaking with respect to 2014, the possibility of setting the 2014 requirements at the levels originally proposed in November 2013, as suggested by some obligated party commenters that asserted that they used those proposed levels for planning purposes. However, we do not believe it would have been reasonable for obligated parties to assume that the November 2013 proposed volumes would be finalized unchanged. The statutory volume targets for cellulosic biofuel, advanced biofuel and total renewable fuel, as well as NPRM preamble statements for these fuels and biomass-based diesel, clearly provided notice to obligated parties that the final volume requirements could be substantially different than proposed. Nevertheless, we have extended the 2014 compliance demonstration deadline to allow such parties additional time to acquire the RINs needed for compliance. In light of all of these considerations, we have determined that it is appropriate to establish volume requirements for 2014 that reflect actual renewable fuel supply in that year.

To the extent that EPA's independent action to reduce statutory volumes satisfies the petition requests, those requests are now moot and EPA is taking no further action with respect to them. EPA is denying the waiver petitions to the extent they seek differing reductions in applicable volumes than are set forth in this final rule. We believe it is unnecessary to evaluate concerns raised by certain petitioners that implementation of the statutory applicable volumes would cause severe economic harm, since such concerns were predicated on underlying concerns of inadequate domestic supply and such supply concerns are directly addressed by this final rule.

7. Changes to Regulations

In addition to finalizing the aforementioned volume requirements and associated percentage standards, we are also finalizing amendments to the RFS requirements to address two issues. First, we are finalizing changes with respect to the previously-approved algal oil pathways in Table 1 to 40 CFR 80.1426 to clarify that only biofuels produced from oil from algae grown photosynthetically qualify for the RFS program under the algal oil pathways in Table 1 to 40 CFR 80.1426. Since EPA assumed that algae would be grown photosynthetically when it evaluated the lifecycle greenhouse gas emissions associated with the existing algal oil pathways, we are clarifying the regulatory description of these pathways to align with EPA's technical assessment and interpretation of the scope of the pathways.

We are aware of companies that plan to produce biofuels from algae that use non-photosynthetic types of 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. EPA has not conducted a full lifecycle GHG analysis of emissions associated with biofuel produced using non-photosynthetic algae. Such analysis would need to be completed in order to determine whether fuels produced using these microorganisms meet the lifecycle GHG threshold for advanced biofuels.

We are also finalizing revisions to 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 deadlines vary for each of these parties depending on the applicable compliance period, and some parties will be required to submit partial annual reports representing a portion of the 2014 compliance year. A detailed description of our changes to reporting deadlines can be found in Section VI.B.

8. Assessment of Aggregate Compliance Approach

By November 30 of each year we are required to assess the status of the aggregate compliance approach to land-use restrictions under the definition of renewable biomass for both the U.S. and Canada. In today's action we are providing the final announcements for these administrative actions.

As part of the RFS regulations, EPA established an aggregate compliance approach for renewable fuel producers who use planted crops and crop residue from U.S. agricultural land. This compliance approach relieved such producers (and importers of such fuel) of the individual recordkeeping and reporting requirements otherwise required of producers and importers to verify that such feedstocks used in the production of renewable fuel meet the definition of renewable biomass. EPA determined that 402 million acres of U.S. agricultural land was available in 2007 (the year of EISA enactment) for production of crops and crop residue that would meet the definition of renewable biomass, and determined that as long as this total number of acres is not exceeded, it is unlikely that new land has been devoted to crop production based on historical trends and economic considerations. We indicated that we would conduct an annual evaluation of total U.S. acreage that is cropland, pastureland, or conservation reserve program land, and that if the value exceed 402 million acres, producers using domestically grown crops or crop residue to produce renewable fuel would be subject to individual recordkeeping and reporting to verify that their feedstocks meet the definition of renewable biomass. As described in Section VII.A, based on data provided by the USDA, we have estimated that U.S. agricultural land did not exceed the 2007 baseline acreage in 2013, 2014, or 2015. This assessment means that the aggregate compliance provision can continue to be used in the U.S. for calendar years 2014, 2015, and 2016.

On September 29, 2011, EPA approved the use of a similar aggregate compliance approach for planted crops and crop residue grown in Canada. The Government of Canada utilized several types of land use data to demonstrate that the land included in their 124 million acre baseline is cropland, pastureland or land equivalent to U.S. Conservation Reserve Program land that was cleared or cultivated prior to December 19, 2007, and was actively managed or fallow and non-forested on that date (and is therefore RFS2 qualifying land). As described in Section VII.B, based on data provided by Canada, we have estimated that Canadian agricultural land did not exceed the 2007 baseline acreage in 2013, 2014, or 2015. This assessment means

that the aggregate compliance provision can continue to be used in Canada for calendar years 2014, 2015, and 2016.

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 under CAA 211(o)(3)(B)(ii) it must establish applicable volumes for biomass-based diesel 14 months in advance of the corresponding compliance year. EPA did not meet these statutory deadlines for the 2014 and 2015 percentage standards, or for the BBD applicable volumes established in this rule. Nevertheless, the percentage standards established through this rulemaking will apply to all gasoline and diesel produced or imported in calendar years 2014, 2015, or 2016 as applicable, and the 2017 applicable volume will form the basis for the BBD percentage standard that is required by statute to be established by November 30, 2016, that will apply to all biodiesel produced or imported in 2017.

We acknowledge that this rule is being finalized later than the statutory deadlines noted above. However, the statute requires that EPA established percentage standards applicable to each calendar year, and applicable volumes for BBD, and we do not believe we are relieved of these obligations by missing the statutory deadlines. Moreover, parties have been producing and using renewable fuels, and generating and acquiring RINs for compliance even in the absence of the annual standards being in place, with the expectation that the requirements would ultimately be finalized. We believe it is important not to upset these reasonable expectations, both for the parties involved and for the long-term integrity of the RFS program. The 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 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 BBD applicable volumes for 2014-2017, notwithstanding EPA's delay.

EPA is exercising its authority to issue standards applicable to past time periods in a reasonable way. Thus, for 2014, EPA is establishing renewable fuel obligations that reflect actual renewable fuel used as transportation fuel, heating oil, or jet fuel during that time period, and the final August 1, 2016 compliance deadline for 2014 (which is two months later than proposed) will allow time for obligated parties to complete necessary transactions to meet obligations. For

2015 we are similarly taking into account actual renewable fuel use during the time that has already passed in 2015, and establishing an extended compliance demonstration deadline of December 1, 2016 – a full year after signature of today's rule, and 11 months after the close of the 2015 compliance period. 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 final volume requirements and standards. While we acknowledge the uncertainty that the market has experienced due to the delay, our final rule bases the applicable volume requirements for 2014 and 2015 on an assessment of past production. As a result, there will be an adequate quantity of RINs available to satisfy those portions of the final requirements. In addition, there are a number of program flexibilities that will facilitate compliance. There is a bank of carryover RINs that will make the RIN market more fluid, and facilitate the acquisition of RINs that can be used to comply with the 2014 RVOs. That same 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 year, and in any competitive marketplace, and we believe that obligated parties have had sufficient experience with the RFS program to have learned to take appropriate precautionary measures to avoid such results. 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. Some commenters asserted that BBD volume requirements for 2014 and 2015 should be set at the level proposed in November, 2013, rather than levels actually supplied in those years. Some commenters suggested that all 2014 volume requirements should be set equal to those proposed in 2013. As described in Section III, EPA disagrees with these commenters that obligated parties lacked notice that EPA could set final volume requirements for these years higher than proposed in 2013, or that setting the requirements to reflect actual supply would pose an unreasonable burden on obligated parties, particularly in light of the nested nature of the standards. Sufficient RINs were generated in these years to allow compliance, and carryover RINs, deficit carryforwards and delayed compliance demonstration deadlines are all in place to facilitate compliance. In sum, we believe that EPA's final approach is authorized and reasonable, though late.

D. Outlook for 2017 and Beyond

We recognize the important public policy goals at the heart of the RFS program, and we acknowledge 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 finalized today 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, and we intend to set

standards in future years that continue to capitalize on the market's ability to respond to those standards with expansions in production and infrastructure.

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.E, we believe that the market is capable of responding to ambitious standards by expanding all segments of the market needed to increase renewable fuel supply and modify fuel pricing to provide incentives for the production and use of renewable fuels.

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 as we have for the 2016 volumes in this rule. In particular we will focus on the emergence of advanced biofuels including cellulosic biofuel consistent with the statute. 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.

We also intend to take additional steps to facilitate the development and use of advanced biofuels. In particular, we will be initiating action to allow the production of renewable fuels to occur in steps at more than one facility. Partial conversion of a renewable feedstock into a so-called "biointermediate" at remote facilities for subsequent final processing into renewable biofuel at the primary production facility has been identified by several industry members as an important option to reduce the cost and enhance the availability of cellulosic and other advanced biofuels. However, under the existing RFS regulations, renewable fuels must generally be produced from renewable feedstocks at a single facility in order to be eligible to generate RINs. We are currently working on a rulemaking that would propose amendments to the RFS program to allow for more favorable treatment of such biointermediates. We believe a rulemaking is necessary to provide clarity for stakeholders and for proper compliance and enforcement oversight.

We believe that the use of biointermediates to produce renewable fuels holds considerable promise for the future growth in production of the cellulosic and advanced biofuels required under the RFS program. While near-term production may be modest, significant potential for further growth in the long-term exists, as these technologies can lower the cost of utilizing cellulosic and other feedstocks for the production of renewable fuels by reducing the storage and transportation costs associated with cellulosic biomass and taking advantage of existing ethanol and petroleum refinery assets to convert the biomass to renewable fuel. This makes biointermediates a critical component of the growth of the RFS program in the future and in particular the growth of cellulosic biofuel volumes.

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. A number of commenters provided ideas in this regard, including suggestions that EPA take regulatory action to modify the administration of the cellulosic waiver credit (CWC) program to better provide stronger support for actual volume purchases, and to change the RFS program's point of obligation from its current focus on producers and importers of gasoline and diesel. Both of these issues are beyond the scope of this rulemaking. However, we will continue to actively monitor the functioning of the market, assess all relevant data, and review our options as necessary.