

Cellulosic Biofuel Standard Guidance

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Assessment and Standards Division
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The Clean Air Act requires the use of increasing volumes of renewable fuel and three sub-categories of renewable fuel (cellulosic biofuel, biomass-based diesel, and advanced biofuel) in the nation's transportation fuel supply. This obligation applies to refiners and importers of gasoline and diesel fuel ("obligated parties"), who determine their individual responsibilities by multiplying annual percentage standards set by EPA by the volume of gasoline and diesel fuel they produce or import in a given year. The regulations implementing these requirements are published in 40 CFR Part 80, Subpart M. This document is intended to provide basic guidance on the options available for compliance with the cellulosic biofuel standard.¹ It does not replace or supplant the relevant regulations.

Establishing the Cellulosic Biofuel Requirement

The Clean Air Act specifies increasing "applicable volumes" of cellulosic biofuel intended to be used as transportation fuel for each year from 2010 through 2022². However, the statute requires that EPA annually project the volume of cellulosic biofuel that will be produced, and if that projection is less than the statutory applicable volume, the statute requires EPA to use the lower projected value in determining the blending requirement for cellulosic biofuel for that calendar year. For each year since 2010, when the first cellulosic biofuel requirement was established, EPA's projection of cellulosic biofuel production has been substantially lower than the statutory applicable volume.

Availability of Cellulosic Waiver Credits

The CAA requires that for any year that EPA reduces the required volume of cellulosic biofuel below the statutory applicable volume, that EPA provide cellulosic biofuel waiver credits for purchase for that compliance year. These credits can be used to demonstrate compliance with the cellulosic biofuel standard in lieu of demonstrating compliance through retiring cellulosic biofuel renewable identification numbers ("RINs") that represent the use of physical gallons of cellulosic biofuel. Currently, EPA makes available on an annual basis a volume of cellulosic biofuel waiver credits equal to the reduced cellulosic biofuel volume requirement established by EPA for a given compliance year. These credits are made available for purchase at the time an obligated party submits its annual compliance report to EPA.

Price of Cellulosic Waiver Credits

The CAA directs EPA to establish the price of cellulosic biofuel waiver credits according to a formula, whereby the price of cellulosic biofuel waiver credits for any year in which they were made available is equal to the greater of:

¹ For the purposes of the Renewable Fuel Standard program, cellulosic biofuel is defined as renewable fuel derived from any cellulose, hemi-cellulose, or lignin that is derived from renewable biomass and that has lifecycle greenhouse gas emission that are at least 60 percent less than the baseline lifecycle greenhouse gas emissions.

² These volumes are specified in CAA 211(o)(2)

- \$0.25 per cellulosic biofuel waiver credit, adjusted for inflation in comparison with calendar year 2008
- \$3.00 (adjusted for inflation in comparison with calendar year 2008) less the wholesale price of gasoline

. The wholesale price of gasoline is calculated by averaging the most recent twelve monthly values for U.S. Total Gasoline Bulk Sales (Price) by Refiners as provided by the Energy Information Administration that are available as of September 30 of the year preceding the compliance period (i.e. July 2012 – June 2013 data will be used in calculating the 2014 cellulosic biofuel waiver credit price). The \$0.25 and \$3.00 terms are adjusted for inflation based on information from the Bureau of Labor and Statistics.³

Complying with the Cellulosic Biofuel Standard

There are two basic ways obligated parties can comply with their cellulosic biofuel obligations. They may either secure cellulosic biofuel (D3) or cellulosic diesel (D7) RINs or they may purchase cellulosic biofuel waiver credits. Due to the nested nature of the RFS standards, RINs used to meet an obligated party's cellulosic biofuel obligation are also counted towards their advanced biofuel and total renewable fuel obligations. Cellulosic biofuel waiver credits, conversely, do not count towards an obligated party's advanced biofuel or total renewable fuel obligations. If a company complies with their cellulosic biofuel obligation using cellulosic biofuel waiver credits, they must purchase sufficient RINs to fully satisfy their non-cellulosic biofuel obligations.

For example, consider a scenario where an obligated party has a total renewable obligation of 10 RINs, an advanced biofuel obligation of 5 RINs, and a cellulosic biofuel obligation of 2 RINs. One way for the obligated party to comply with these requirements would be to secure 2 cellulosic biofuel RINs (D3 or D7), 3 advanced biofuel RINs (D5)⁴ and 5 conventional biofuel RINs (D6). The cellulosic biofuel RINs can be counted towards meeting the cellulosic biofuel, advanced biofuel, and the total renewable fuel standards; advanced RINs can be counted towards meeting the advanced biofuel and total renewable fuel standards. Alternatively, an obligated party could comply with the same requirements by purchasing 2 cellulosic biofuel waiver credits and securing 5 advanced biofuel RINs and 5 conventional biofuel RINs. Note that in this case the cellulosic biofuel waiver credits only satisfy the obligated party's cellulosic biofuel obligation; they do not count towards the advanced biofuel or total renewable fuel obligations. As a result, the obligated party must secure an additional 2 advanced biofuel RINs (5 rather than 3) to comply with their advanced and total renewable fuel obligations if they purchase cellulosic biofuel waiver credits rather than securing cellulosic biofuel RINs. In effect, a cellulosic biofuel RIN (D3 or D7) is the functional equivalent of a cellulosic biofuel waiver credit and an advanced biofuel RIN for purposes of compliance.

³ See [DFR Citation] for more detail on the information and methodology used to calculate the CWC price

⁴ Biomass based diesel RINs (D4) or additional cellulosic biofuel RINs (D3 or D7) could also be used towards meeting the advanced biofuel standard, as the biomass based diesel and cellulosic biofuel are nested within the advanced biofuel category. For the sake of simplicity, however, these scenarios are not discussed in the above example.

Obligated parties may also carry forward a cellulosic biofuel deficit from one year to the next if they choose not to meet their cellulosic biofuel obligation by securing cellulosic biofuel RINs or purchasing cellulosic biofuel waiver credits. If they do so, however, they must satisfy their deficit, along with the next year's full obligation of cellulosic biofuel, in the following year. Cellulosic biofuel deficits from a previous year cannot be satisfied with cellulosic biofuel waiver credits. Obligated parties must secure cellulosic biofuel RINs (D3 or D7) to meet any deficits from a previous year.

Differences between Cellulosic Biofuel RINs and Cellulosic Biofuel Waiver Credits

The primary difference between cellulosic biofuel RINs and cellulosic biofuel waiver credits is that, as discussed above, the cellulosic biofuel waiver credits cannot be used to satisfy an obligated party's advanced and total renewable fuel obligations. Cellulosic biofuel waiver credits also cannot be used to satisfy an obligated party's cellulosic biofuel obligation carried over from a previous year. They can only be used for an obligated party's current year cellulosic biofuel obligation. Finally, cellulosic biofuel waiver credits are only available for purchase from EPA at the time of compliance and cannot be traded, sold, or banked for used in future years.