



RFS Still Falls Short of Targets

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As we enter 2016, Americans must now comply with the new Renewable Fuel Standard (RFS) volumes, which were set late last year. The latest iteration of the regulation calls for 18.11 billion gallons of renewable fuel to be blended with gasoline, an amount over 4 billion gallons short of the EPA’s original target of 22.25 gallons. The final regulation shows that the EPA has failed once again to get the RFS on track to comply with the goals of the Energy Policy Act. As the EPA struggles to find enough renewable fuel to meet its goals, it may be time to consider a reset on this costly, uncertain, and challenging regulation.

The Renewable Fuel Standard

The RFS was first introduced in the [2005 Energy Policy Act](#) (EPAct). In 2007, the EPAct was amended and set renewable fuel targets for 2022. The legislation was initially intended to reduce American reliance on energy imports, but has since become environmentally focused. The EPA has been regulating the RFS, releasing new standards each year, but has consistently [failed to meet targets and deadlines](#) set by the EPAct.

The 2007 legislation set a target of [36 billion gallons](#) renewable fuel use by 2022, and targets were set for each year. For 2016, the target was 22.25 billion gallons of renewable fuel, 15 billion of which would come from ethanol. The latest regulation sets a revised target of 18.1 billion gallons of renewable fuel, with only 14.5 billion coming from ethanol.

Initial RFS Targets

Initial RFS Targets Set in 2007

Year	2014	2015	2016
Cellulosic biofuel	1.75	3	4.25
Biomass-Based diesel	*	*	*
Advanced biofuel	3.75	5.5	7.25
Total renewable fuels	18.15	20.5	22.25



[Source: EPA](#)

Finalized RFS Targets Set in November, 2015

Year	2014	2015	2016
Cellulosic biofuel	0.33	1.23	2.3
Biomass-Based diesel	1.63	1.73	1.9
Advanced biofuel	2.67	2.88	3.61
Total renewable fuels	16.28	16.93	18.11

[Source: EPA](#)

The November 2015 RFS rulemaking also highlighted the failure of the EPA to finalize the RFS regulations in a timely manner. The 2015 release not only set the RFS targets for 2016 and 2015, but retroactively for 2014 as well. The 2014 release came 94 weeks behind schedule, meaning that it is uncertain if obligated parties were even compliant with this latest ruleset. Inconsistency in reporting has contributed to marketplace uncertainty, which is expected to have a detrimental effect on the market. The initial 2007 targets were also based on an expectation of cellulosic biofuel growth which was not achieved, and a major producer of cellulosic biofuel [even went bankrupt](#). The latest rules show that the EPA continues to scramble to find enough renewable fuel to meet the 2007 targets.

Cost Analysis

The RFS has an impact on fuel prices. Ethanol is more expensive per gallon than gasoline. The current fuel prices (dated 1/27/16) are [\\$1.05/gallon](#) for RBOB gasoline (Reformulated Gasoline Blendstock for Oxygen Blending), and [\\$1.40/gallon](#) for ethanol.* Ethanol also has a lower energy density than gasoline (reflected in fuel efficiency), and it takes [1.51 gallons of ethanol](#) to achieve the energy of a single gallon of gasoline, meaning at current prices it costs \$1.06 more for the same amount of energy. The latest RFS will require 14.5 billion gallons of ethanol to be blended, which will have the energy equivalent of 9.6 billion gallons of gasoline. If the cost difference continues to be around \$0.35/gallon higher for ethanol, then the RFS could end up costing consumers around \$10 billion in 2016. Even if the gap

*Prices are from the EIA's daily prices, and are subject to market fluctuation. Resulting estimates are not specific cost predictions, and should be used only as a guideline.



compresses to around \$0.20 (what was originally projected for 2016), the costs would still be around \$9 billion.

	Number of Gallons	Price	Cost
Ethanol	14,500,000,000	\$1.40	\$20,300,000,000
Gasoline	9,602,649,007	\$1.05	\$10,082,781,457

Difference: \$10,217,218,543

These estimates also do not take into account the RFS’ effect on food prices, which is more difficult to gauge. According to a [report by the Congressional Budget Office](#), about 40 percent of corn in the U.S. is used for ethanol. The CBO acknowledges that corn is a foundation crop, and that the RFS creates upward pressure on prices of corn and related products (animal feed, corn syrup, cornmeal, etc.). However, the CBO believes that the RFS only has a marginal impact on food prices, since they expect high demand for ethanol even without the RFS. In contrast, Resources for the Future (a resource focused think tank) estimates that global food prices will rise by 32 percent between 2007 and 2022, versus a projected 15 percent cost increase without the combined U.S. and EU RFS. Rising food prices are correlated with other factors (such as oil prices), and it is unclear just how small or large a role the RFS has played in this.

Time for a Reset?

2016 marks the first year that the RFS would be allowed to reset its overall fuel targets. At a [Senate hearing](#) in June of last year, [Janet McCabe](#), an Assistant Administrator at the EPA, acknowledged that the EPA would have to seriously consider the possibility of reevaluating its renewable fuel targets for the future. Such a process would be lengthy though, and it is doubtful that any finalized rules would come before the next administration.

Conclusion

The EPA’s finalized RFS once again failed to meet legally mandated targets, and also came nearly two years late. Investors and obligated parties are being left in the dark by the EPA on the future of the RFS, and given that 2016 marks the first year eligible for an RFS reset, there is an increasing level of market uncertainty. The future of the RFS may have to wait until the next administration enters office, keeping market participants on edge until 2017. The EPA needs more



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transparency, efficiency, and consistency in its rulemaking to avoid further problems with this costly regulation.