



## **CRS Report for Congress**

# **Waiver Authority Under the Renewable Fuel Standard (RFS)**

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### **Summary**

Transportation fuels are required by federal law to contain a minimum amount of renewable fuel each year. This renewable fuel standard (RFS), established by the Energy Policy Act of 2005 (EPAct, P.L. 109-58) and amended by the Energy Independence and Security Act of 2007 (EISA, P.L. 110-140), requires that 9.0 billion gallons of renewable fuels be blended into gasoline and other transportation fuels in 2008. Most of this mandate will be met using corn-based ethanol. However, high prices and tight supplies for oil, gasoline, and food/feed grains have raised concerns over whether the current RFS should be modified or eliminated. Some policymakers are arguing that demand for corn-based ethanol has contributed significantly to price increases for food. The Environmental Protection Agency (EPA) has the authority to waive the RFS requirements, in whole or in part, if certain conditions outlined in the law are present. The governor of Texas recently requested a waiver of the RFS because of high grain prices, and there is growing congressional interest in the EPA waiver authority. This report provides a brief overview of the RFS program and discusses the process and criteria for EPA to approve a waiver petition.

### **Introduction**

The Energy Policy Act of 2005 (EPAct, P.L. 109-58) established a renewable fuel standard (RFS), requiring the blending of biofuels (such as ethanol) in the nation's fuel supply. The Energy Independence and Security Act of 2007 (EISA, P.L. 110-140) significantly expanded this mandate. The RFS mandate has been a major impetus to the development of the U.S. ethanol industry. As a result, ethanol production capacity and the demand for corn as a biofuel feedstock have grown dramatically over the past few years. In 2005, the United States produced 3.9 billion gallons of ethanol, requiring roughly 1.4 billion bushels of corn; in 2007, those numbers had increased to 6.5 billion gallons and 2.3 billion bushels. In 2007, roughly one-quarter of the U.S. corn crop was directed to ethanol production.

Increasing demand for corn for biofuels, the rise in energy prices, and other supply concerns in grain markets have led to rapid increases in corn and other grain prices. These higher grain prices have raised concern globally over food prices and availability. Because of these concerns, there is growing interest among some policymakers to amend or eliminate the RFS. Under the provisions of EPAct and EISA, the administrator of the Environmental Protection Agency (EPA) has the authority to waive the RFS requirements in whole or in part, in response to a petition by a state or a fuel provider, or on his own motion.

On April 25, 2008, Texas Governor Rick Perry sent a letter to EPA Administrator Stephen Johnson, petitioning for a 50% waiver from the RFS requirements.<sup>1</sup> EPA must approve or disapprove the waiver within 90 days of receipt of the petition — by July 24, 2008. In his letter, Governor Perry states that he initiated the petition because of the negative effect of the requirements on the Texas economy and on global food prices.

## Current RFS Requirements

Currently, the RFS requires the blending of 9.0 billion gallons of renewable fuel in transportation fuels in 2008, increasing to 36 billion gallons in 2022. Of this mandate, an increasing share must be met with “advanced biofuels” — biofuels produced from feedstocks other than corn starch — including cellulosic biofuel and bio-based diesel substitutes. However, these advanced biofuel mandates do not begin to be phased in until 2009 and 2010.<sup>2</sup> As has been the case in previous years, in 2008 the vast majority of the mandate is expected to be met with U.S. corn ethanol (and a smaller amount of sugarcane ethanol from Brazil). The 9.0-billion-gallon mandate for 2008 is roughly double the mandated amount in 2007 (4.7 billion gallons) and roughly 30% higher than 2007 consumption (6.8 billion gallons).

In future years, corn ethanol’s share of the RFS is effectively capped at 15 billion gallons per year. The EISA amendments to the RFS specifically mandate the use of cellulosic biofuel (16 billion gallons by 2022) and biomass-based diesel fuel (1.0 billion gallons annually by 2012).

## Waiver Provisions

As amended by EISA, section 211(o)(7) of the Clean Air Act<sup>3</sup> gives the EPA administrator the authority to waive, in whole or in part, the total volume of renewable fuel mandated by the RFS if, in his determination, there is inadequate domestic supply to meet the mandate, or if “implementation of the requirement would severely harm the

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<sup>1</sup> Rick Perry, governor of Texas, *Letter to The Honorable Stephen L. Johnson, Administrator, U.S. Environmental Protection Agency*, April 25, 2008.

<sup>2</sup> For more information, see CRS Report RL33290, *Fuel Ethanol: Background and Public Policy Issues*, by Brent D. Yacobucci.

<sup>3</sup> 42 U.S.C. 7545(o)(7).

economy or environment of a State, a region, or the United States.”<sup>4</sup> Further, under certain conditions, the EPA administrator may waive (in whole or in part) the specific carve-outs for cellulosic biofuel and biomass-based diesel fuel.

**General Waiver.** On the petition of a state or a fuel provider, or at his own discretion,<sup>5</sup> the administrator may waive the overall RFS requirement for a given year. If a waiver is granted, any adjustment applies to total national requirement. Regardless of who initiates the waiver petition, all fuel suppliers’ quotas would be reduced by a similar percentage. As the law is written, EPA may not waive the requirement for an individual state or supplier within a state, but must reduce the entire national mandate.

To grant the waiver, the EPA administrator must determine, in consultation with the Secretaries of Agriculture and Energy, that one of two conditions has been met:

- there is inadequate domestic renewable fuel supply; or
- implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States.

However, it is unclear how EPA will interpret these criteria. In its May 1, 2007, final rule for 2007 onward,<sup>6</sup> EPA explicitly stated that it would not establish more specific criteria for the waiver.

While EPA realizes that the criteria provided by the statute are quite general, the rationales of severe environmental or economic harm or inadequate domestic supply are sufficient for a basic framework upon which a petition can be built and evaluated. Each situation in which a waiver may be requested will be unique, and promulgating a list of more specific criteria in the abstract may be counter-productive.<sup>7</sup>

Within 90 days of receipt of the waiver petition, EPA must act to approve or disapprove the petition, after public notice and opportunity for comment.<sup>8</sup> If EPA does grant a waiver, the waiver expires after one year, but may be extended by the EPA administrator in consultation with the Secretaries of Agriculture and Energy.

**Cellulosic Biofuel Waiver.** As part of the RFS, EISA established a specific mandate for the use of cellulosic biofuels — ethanol or other fuels produced from woody or fibrous materials such as grasses, trees, etc. The cellulosic carve-out starts in 2010 at 0.1 billion gallons, and increases to 16.0 billion gallons by 2022. Current cellulosic

<sup>4</sup> 42 U.S.C. 7545(o)(7)(A)(i).

<sup>5</sup> Under EPAAct, only states could petition EPA for the waiver. EISA amended the RFS to allow fuel providers to file a petition, and to give the EPA administrator authority to initiate the process on his own motion.

<sup>6</sup> EPA, *Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program; Final Rule*, May 1, 2007. 72 Federal Register 23899-24014.

<sup>7</sup> 72 Federal Register 23928.

<sup>8</sup> As of May 1, 2008, EPA had not yet established the public comment period for the Texas waiver request.

biofuel production is virtually nonexistent, but several demonstration-scale projects have broken ground or are expected to break ground relatively soon.

If the EPA administrator determines that the projected production volume of cellulosic biofuel for a given year is less than the mandated amount, he may reduce the carve-out. If he is going to do so, the administrator must reduce the required amount by November 30 of the preceding calendar year. If the administrator does reduce the mandated amount of cellulosic biofuel, he may also reduce the total volume required for that year under the RFS by an equal or lesser amount, but he is *not required* to do so.

Unlike the general waiver, only the EPA administrator may initiate a decision on a cellulosic biofuel waiver.

**Biomass-Based Diesel Waiver.** Similar to the cellulosic biofuel carve-out, EISA also established a specific mandate for the use of biomass-based diesel fuel. Currently, most of this fuel is “biodiesel” — a diesel fuel substitute produced from soybean oil and other vegetable oils through a process called “transesterification” — but other fuels, some of which are termed “renewable diesel,” would also qualify. The biomass diesel carve-out starts in 2009 at 0.5 billion gallons and increases to 1.0 billion gallons by 2012. Approximately 450 million gallons of biodiesel were produced in the United States in 2007.

If the EPA administrator (in consultation with the Secretaries of Energy and Agriculture) determines that there are significant market circumstances (including feedstock disruptions) “that would make the price of biomass-based diesel fuel increase significantly,” the administrator may reduce the amount mandated for up to 60 days.<sup>9</sup> The administrator may extend the waiver for no more than an additional 60 days.

**Reductions in the RFS.** If the administrator waives a significant share of the above requirements, he must reduce the required volumes in all subsequent years. Specifically, he must reduce the applicable amounts in future years if he waives any of the above requirements by

- 20% or more for two consecutive years; or
- 50% or more in a single year.

For example, if the administrator reduced the overall RFS requirement by 6.0 billion gallons in both 2017 and 2018, then he would be required to reduce the total RFS requirement by 6.0 billion gallons in 2019 and beyond. The one exception is that these reductions in the RFS would not apply to the requirements before calendar year 2016.

## Effects of a Waiver

Questions have been raised over how a waiver approval would affect food and fuel markets. As these markets are extremely complex, there is no simple answer. The effects of a waiver would likely depend on many factors:

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<sup>9</sup> However, the amount may not represent more than 15% of the total required amount for that year.

- the degree to which the RFS requirements are relaxed under the waiver;
- the duration of the waiver;
- the scope of the waiver (cellulosic biofuel, biomass-based diesel, or the entire program);
- whether the waiver is extended;
- prevailing supply and prices for oil, gasoline, biofuels, and grain commodities; and
- whether the current tax incentive system for biofuels has been maintained or modified.<sup>10</sup>

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<sup>10</sup> In addition to the RFS mandate, biofuels are also subject to tax incentives for their production and use. Most significantly, fuel providers who blend ethanol into gasoline receive a tax credit of 51 cents for every gallon of ethanol they blend. In addition, small ethanol producers receive a tax credit of 10 cents per gallon on the first 15 million gallons they produce in a give year. Biodiesel and renewable diesel producers receive a tax credit of up to \$1.00 per gallon of fuel they produce. For more information, see CRS Report RL33572, *Biofuels Incentives: A Summary of Federal Programs*, Brent D. Yacobucci.