



EPA Interpretation of the “Inadequate Domestic Supply” Waiver for Renewable Fuels Ruled Invalid: Where to from Here?

Scott Irwin and Darrel Good

Department of Agricultural and Consumer Economics
University of Illinois

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Three words—inadequate domestic supply—have taken center stage in the implementation of the RFS since 2014. The U.S. Environmental Protection Agency (EPA) used a controversial definition of this term to reduce the (implied) conventional ethanol mandate below statutory levels for 2014, 2015, and 2016. A legal challenge was mounted by biofuels groups and the U.S. Court of Appeals in Washington, D.C. ruled in their favor last week. The ruling is generally being interpreted as requiring only the backfill of the shortfall in the 2016 mandate, but there is some uncertainty in this regard. There are also varying opinions about what form the EPA remedy may take. Here we examine some potential outcomes in terms of additional biofuel requirements for alternative interpretations of the Court ruling and alternative EPA remedies.

Background

The EPA has the primary responsibility for implementing the Renewable Fuels Standards (RFS) as outlined in the [Energy Independence and Security Act of 2007](#). That Act established annual mandatory volume requirements for four classes of biofuels to be blended into the domestic motor fuel supply. Those classes include cellulosic biofuels, biomass-based diesel, total advanced biofuels, and conventional biofuels. EPA is responsible for establishing and enforcing annual volume mandates for total biofuels and mandates in each class of biofuel. Statutory provisions guide EPA in establishing the annual volume requirements and some of those provisions either require or allow EPA to establish annual mandates at levels less than the statutory requirements under specific circumstances. Specifically, these waivers include:

1. The general waiver provision which allows EPA to reduce the statutory volume mandates under two circumstances. The provision can be applied if (a) the EPA determines that “implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States or (b) if EPA determines that “there is an inadequate domestic supply”.

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2. The cellulosic biofuels waiver requires EPA to reduce the cellulosic biofuel statutory requirement if the EPA's projected volume of cellulosic biofuels production in any compliance year falls short of the statutory volume. The statutory mandate must be reduced to the level of projected production.
3. The cellulosic waiver provision allows EPA to reduce the advanced and total renewable mandates when the cellulosic waiver is implemented. The reduction can be the same or less than the reduction in the cellulosic requirement.

The EPA has routinely reduced the cellulosic, and therefore advanced and total mandate, below statutory requirements as required due to "inadequate domestic supplies." However, in the December 2015 Final Rulemaking that established renewable fuel standards for 2014, 2015, and 2016 (and biomass-based biodiesel standards for 2017) the EPA reduced the requirement for total biofuels by more than the reduction in the cellulosic mandate, which seemingly is not allowed under (3) above. The additional reduction was not in the class of advanced biofuels, but was in the class of implied conventional biofuels (ethanol). In establishing the lower mandates, the EPA argued that the definition of "inadequate domestic supply" is broader than domestic production and import capacity which falls short of mandated quantities of biofuels. The definition was interpreted to include any constraints on delivering biofuels to the final consumer and/or constraints on consumption (demand) of biofuels. The so called E10 blend wall for ethanol, limited infrastructure for delivering higher ethanol blends to the consumer, and vehicle engine warranties that limited use of higher ethanol blends were all cited as examples of "inadequate domestic supply." For a complete background and discussion of the December 2015 rulemaking with regard to these issues see the *farmdoc daily* articles of [January 7, 2016](#) , [January 14, 2016](#) , and [January 22, 2016](#).

The EPA's interpretation and application of the "inadequate domestic supply" waiver (along with other issues associated with the 2015 final rulemaking) were challenged in a lawsuit by the Americans for Clean Energy, et al. In the [ruling of July 28, 2017](#), the United States Court of Appeals for the District of Columbia Circuit held that EPA erred in how it interpreted the "inadequate domestic supply" waiver provision. Specifically the ruling indicated "We hold that the 'inadequate domestic supply' provision authorizes EPA to consider supply-side factors affecting the volume of renewable fuel that is available to refiners, blenders, and importers to meet the statutory volume requirements. It does not allow EPA to consider the volume of renewable fuel that is available to ultimate consumers or the demand-side constraints that affect the consumption of renewable fuel by consumers." (page 4). The statement of remedy indicated "We therefore grant Americans for Clean Energy's petition for review of the 2015 Final Rule, vacate EPA's decision to reduce the total renewable fuel volume requirements for 2016 through use of its 'inadequate domestic supply' waiver authority, and remand the rule to EPA for further consideration in light of our decision." (page 4) An upcoming *farmdoc daily* article by Jonathan Coppess will provide detail pertaining to the legal interpretation of the ruling.

It seems clear from this statement that the portion of the renewable fuels volume reduction for 2016 based on the "inadequate domestic supply" waiver will have to be restored in some manner determined by EPA. The last portion of the statement, however, is somewhat ambiguous in that the 2015 Final Rule the EPA is to further consider includes reduced mandates for 2014 and 2015 which were also based on the "inadequate domestic supply" waiver that the Court ruled was erroneously interpreted by EPA. One interpretation, then, is that the ruling may apply to 2014 and 2015 as well as 2016. Additional ambiguity stems from the Court ruling relative to the delay in establishing mandates for 2014 and 2015. The ruling states, "In Part III, we consider the issues arising from EPA's delay in promulgating the Final Rule. First, EPA used actual renewable fuel volumes to set the 2014 and 2015 volume requirements in order to minimize the hardship to obligated parties caused by the late issuance of the Final Rule. In doing so, EPA acted reasonably under the circumstances. We therefore reject National Biodiesel Board's and Americans for Clean Energy's arguments to the contrary." (page 18) This statement suggests that the ruling relative to "inadequate domestic supply" applies only to 2016.

The ruling is being variously interpreted as requiring only the "topping off" of the shortfall in the 2016 mandate, but there is some uncertainty whether it also requires the "topping off" of the 2014 and 2015 shortfalls which were much larger than the 2016 shortfall. There are also varying opinions about what form the EPA remedy may take. In the next section, we examine some potential outcomes in terms of

additional biofuel requirements for alternative interpretations of the Court ruling and alternative EPA remedies.

Analysis

First, we look at the magnitude of the RFS statutory requirements and the magnitude of the EPA waivers in the 2015 final rulemaking. Table 1 is a reprint from the July 28 Appeals Court ruling. Column 2 indicates the statutory requirement for total renewable fuels for 2014, 2015, and 2016. Column 3 shows the magnitude of EPA’s cellulosic waiver in each of those three years, column 4 shows the magnitude of the additional waiver based on the EPA interpretation of “inadequate domestic supply,” and column 5 shows the magnitude of the total waiver. The quantities in column 4 were ruled in error. The first issue is whether all volumes in column 4 (totaling 2.24 billion gallons of ethanol equivalents) will be restored in EPA’s remedy or just the 500 million gallons for 2016. The most common interpretation of the ruling is that it applies only to 2016. We include 2014 and 2015 in our analysis due to some ambiguity in the wording in the Court ruling. In addition, the inclusion by the Court of 2014 and 2015 in Table 1 would seem to be unnecessary if the ruling applied only to 2016. Finally, excluding 2014 and 2015 in the remedy due to the lateness of the rulemaking seems to create a perverse incentive for future rulemaking that would just set mandates at actual levels of use as an alternative means for effectively waiving mandates.

Table 1. Total RFS Volume Requirements under the EPA Final Rulemaking, 2014-2016

| Year | Statute | Cellulosic Waiver Reduction | General Waiver Reduction | EPA Rule | Total Reduction from Waivers |
|------|---------|-----------------------------|--------------------------|----------|------------------------------|
| 2014 | 18.15 | 1.08 | 0.79 | 16.28 | 1.87 |
| 2015 | 20.5 | 2.62 | 0.95 | 16.93 | 3.57 |
| 2016 | 22.25 | 3.64 | 0.5 | 18.11 | 4.14 |

Note: These volumes are stated in billion gallons of ethanol equivalents. Reprinted from Americans for Clean Energy, et al., United States Court of Appeals for the District of Columbia Circuit, July 28, 2017.

The second issue involves the likely nature of the EPA remedy. Early commentary has centered around three potential scenarios. One scenario is that the petroleum industry will petition for and be granted a general waiver (based on severe economic harm) from producing biofuels to fill the shortfall created by the EPA error in applying the “inadequate domestic supply” waiver. This outcome seems highly unlikely since the general waiver provision would require determination of severe economic harm to a State, Region, or the United States, not just to an industry or a subset of an industry. The EPA, for example, did not apply this provision as petitioned during the period of high corn prices stemming from the severe drought of 2012. If applied, however, a general waiver of the full amount of the shortfall in biofuels production in the relevant years would mean that the 2015 final rulemaking would stand as implemented. That outcome is reflected in the first section of Table 2 which shows the RFS volumes by class as implemented.

A second implementation scenario being discussed is what we refer to as a “shuffle.” That is, since the mandate for advanced biofuels in 2014, 2015, and 2016 exceeded the minimum required under the cellulosic waiver and the implied conventional mandate fell short of the minimum, EPA could retroactively switch the “excess” advanced mandate to the “deficit” implied conventional mandate. That outcome is reflected in the second section of Table 2. The advanced biofuels total under that scenario is the maximum of: (1) the minimum advanced mandate based on the cellulosic waiver; and (2) the biomass-

based diesel (BDD) mandate (multiplied by 1.53) plus the cellulosic mandate. For example, for 2016 the cellulosic waiver was 4.02 billion gallons (4.25 billion gallon statutory mandate minus 0.23 billion gallon EPA mandate). The minimum advanced mandate, then, was 3.23 billion gallons (7.25 billion gallon statutory minus 4.02 billion gallon cellulosic waiver). The BDD mandate, in ethanol equivalents, was 2.91 billion gallons (1.9 multiplied by 1.53) plus the cellulosic mandate of 0.23 billion gallons was 3.14 billion gallons. The advanced mandate, then, would be the maximum of the two computations, or 3.23 billion gallons. Under this scenario, obligated parties would be allowed to use D4 RINs that they have already retired and apply them to the conventional mandate. To attain the statutory implied conventional mandate, however, the total mandate for all three years would exceed the mandate in the 2015 EPA final rulemaking, particularly for 2014 (0.65 billion gallons) and 2015 (0.84 billion gallons). The total additional biofuels requirement under this scenario would be only 0.12 billion gallons for 2016, but 1.61 billion gallons for all three years. This scenario would make for an easy remedy to the Court ruling if it applies only to 2016, but much more difficult if the ruling applies to all three years. Such a remedy, however, would likely face stiff resistance from the biofuels industry as it would change the trajectory of advanced biofuels production in a manner that would not be consistent with the objectives of the RFS. In addition, any reductions would have to be justified in the rulemaking process and it is not obvious what criteria could be legally used to make such drastic reductions in the advanced mandate.

Table 2. RFS Volume Requirements for the U.S. Under Alternative Scenarios, 2014-2016

| Category | EPA 2014-2016 | | | 2014-2016 | | | 2014-2016 | | |
|----------------------|------------------|-------|-------|------------------|-------|-------|------------------|-------|-------|
| | Final Rulemaking | | | Shuffle Scenario | | | Top Off Scenario | | |
| | 2014 | 2015 | 2016 | 2014 | 2015 | 2016 | 2014 | 2015 | 2016 |
| Cellulosic Biofuel | 0.033 | 0.123 | 0.230 | 0.033 | 0.123 | 0.230 | 0.033 | 0.123 | 0.230 |
| Biomass-Based Diesel | 1.63 | 1.73 | 1.90 | 1.63 | 1.73 | 1.90 | 1.63 | 1.73 | 1.90 |
| Advanced Biofuel | 2.67 | 2.88 | 3.61 | 2.53 | 2.77 | 3.23 | 2.67 | 2.88 | 3.61 |
| Total | 16.28 | 16.93 | 18.11 | 16.93 | 17.77 | 18.23 | 17.07 | 17.88 | 18.61 |
| Implied Conventional | 13.61 | 14.05 | 14.50 | 14.40 | 15.00 | 15.00 | 14.40 | 15.00 | 15.00 |

Notes: These volumes are stated in billion gallons of ethanol equivalents, except for biomass-based diesel which is stated in billion gallons of "wet" physical volume terms.

A third implementation scenario, referred to here as the "top off" scenario would leave the EPA advanced mandates in the 2015 final rulemaking unchanged and raise the implied conventional mandates to the statutory levels. That scenario is reflected in the third section of Table 2. The result would be an increase in the implied conventional and total mandates of 0.5 billion gallons if applied only to 2016, but an increase of 2.24 billion gallons if applied to all three years. Whether the backfill is 2016 only or 2014-2016, the "top off" scenario is the most likely outcome in our view.

Implications

The most popular opinion seems to be that the Court of Appeals ruling against the EPA's interpretation of "inadequate domestic supply" used in establishing the 2015 RFS final rulemaking applies only to 2016. In addition, it is generally believed that the EPA remedy will involve increasing the implied conventional (ethanol) mandate by 500 million gallons. If so, the increase could conceivably be implemented in one year, 2018, or over a period of time. Given the ambiguity in the court ruling relative to 2014 and 2015, we included those years in our analysis. Including those years in the remedy would require as much as 2.24 billion gallons (in ethanol equivalents) in additional biofuels production over some period of time. While not impossible to implement, such a remedy would be much more complicated and would likely face stiff resistance.

In addition to the scope of the remedy, a relevant question involves the pathway of implementing the remedy. As indicated in the *farmdoc daily* article of July 26, 2017, since 2013 biomass-based diesel (BBD) (which includes both biodiesel and renewable diesel) has been the "marginal gallon" for complying not only with the advanced mandate but also the conventional (ethanol) mandate due to the constraints on ethanol consumption presented by the E10 blend wall. The court ruling that the EPA erred in interpreting "inadequate domestic supply" to include demand constraints does not alter the fact that demand side constraints for ethanol still exist. As a result, implementation of the EPA remedy, whatever that entails, will likely be accomplished with additional quantities of BBD, not ethanol.

Next week, we will use the estimated biomass-based diesel supply curves developed in the *farmdoc daily* article of July 26, 2017 to examine the implications for biodiesel prices and D4 RINs prices for alternative implementation scenarios.

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