



## 2018 Mid-Year RIN Update

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Today's article provides the second quarterly update on RIN generation for 2018. Generation figures and projections are based on available data from EPA's EMTS through June of 2018, with annual projections compared with the target mandate levels outlined in the [final rulemaking for 2018](#). The previous RIN update (*farmdoc daily* [May 23, 2018](#)) provided summary net generation estimates for the first quarter of 2018.

### Advanced RIN Generation

Through June, just under 110 million D3 RINs have been generated, an average pace of nearly 18.3 million per month. An additional 1.5 million D7 RINs have been generated, coming primarily from cellulosic diesel and also some heating oil. These generation figures would put projected cellulosic RIN generation at close to 225 million for the year, falling short of the 288 million gallon cellulosic mandate level for 2018 and implying the need for obligated parties to purchase cellulosic waiver credits for 2018 compliance.

Figure 1 plots monthly D4 RIN generation relative to implied monthly mandate needs (annual mandate divided by 12) using data from the EMTS through June 2018. Gross generation of D4 RINs now total nearly 1.77 billion, averaging almost 295 million per month through the first half of the year. Since 2014, generation of D4 RINs in the second half of the year has been at least 20% higher than over the first six months. If this historical pattern continues, generation of D4 RINs in 2018 would likely reach 3.9 billion. This would provide sufficient D4 RINs to meet the 2.1 billion gallon (3.15 billion RIN) mandate for 2018, while also providing surplus D4 RINs to apply towards the total non-cellulosic advanced mandate.

The pace of generation of D5 RINs declined slightly in the second quarter, and is now averaging just over 6.8 million per month through June. Similar to D4 RINs, generation of D5 RINs typically increases in the second half of the year. In 2016, 38% more D5 RINs were generated in the second half of the year than in the first half. In 2017, the pace of generation increased by over 75% in the second half of the year. This implies total generation of D5 RINs could still reach or exceed 100 million in 2018.

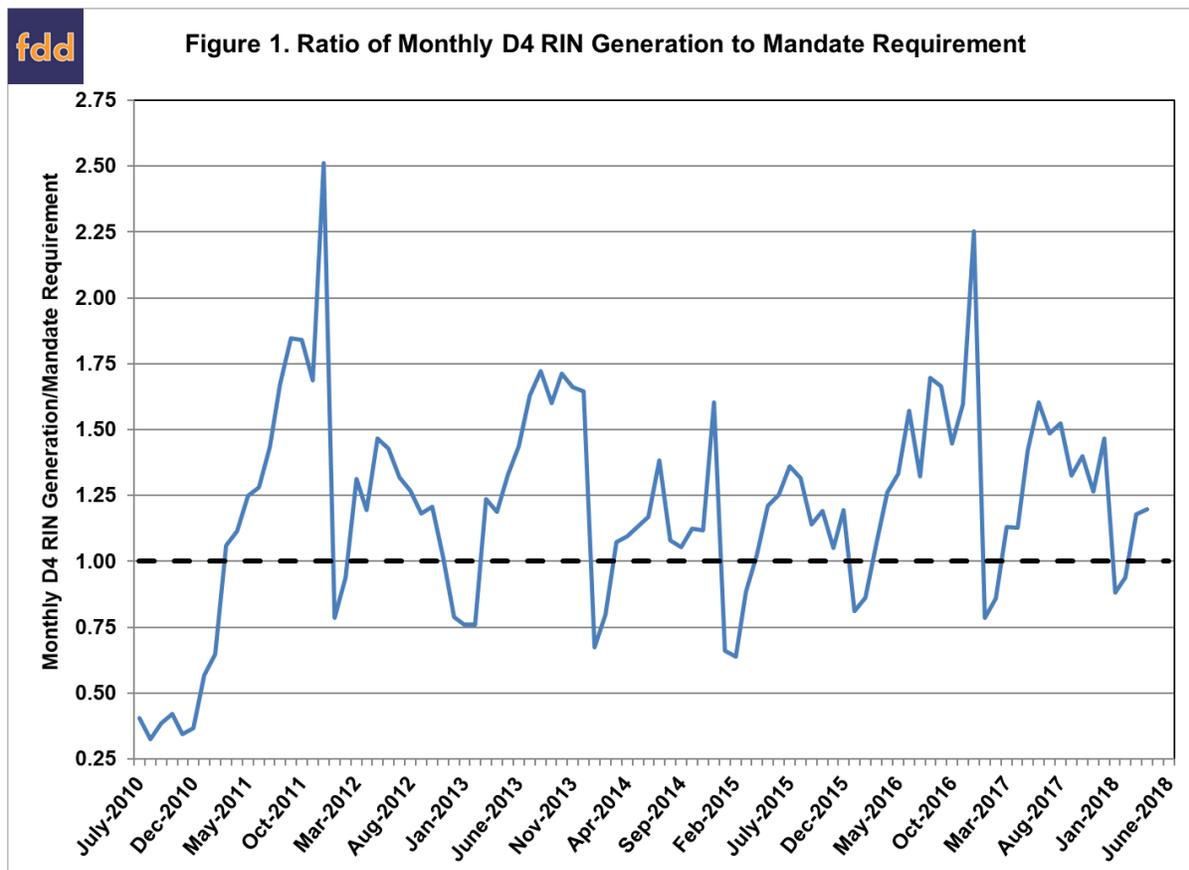
Combining the D4 and D5 RIN generation projections results in a total estimated gross generation at or slightly exceeding the 4.01 billion RIN non-cellulosic advanced mandate level for 2018 (4.29 billion total

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advanced less the 288 million cellulosic). Retirements of a portion of those RINs due to biodiesel exports and non-compliance purposes will ultimately reduce the amount available for compliance.

Data from the EIA reports a total of 28.4 million gallons (42.6 million RINs) of biodiesel exports through April. Historically, biodiesel exports are higher from March through October, a pattern that seems to be continuing in 2018. Through April, biodiesel exports are 30% higher than for the first four months on 2017. This suggests that total exports in 2018 could exceed the average of 90 million gallons (135 million RINs) experienced over the past 3 years.



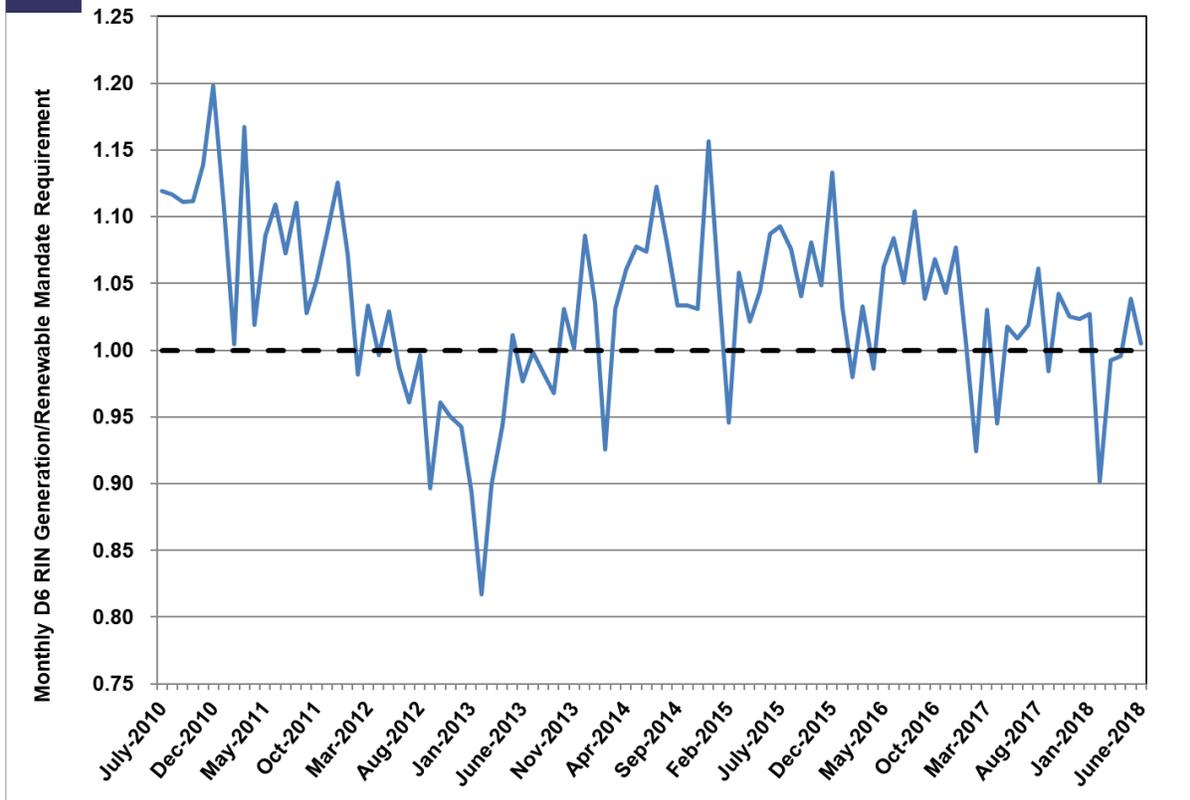
### D6 RIN Generation

Figure 2 plots D6 RIN generation relative to implied mandate needs through June 2018. Monthly gross generation has increased slightly in the second quarter, and is now averaging just over 1.24 billion. This remains just slightly above the pace of generation over the first half of 2017, suggesting that gross generation will likely reach 15.1 billion D6 RINS again in 2018.

While this rate of generation would be sufficient to cover the 15 billion RIN renewable gap portion of the overall mandate for 2018 (19.29 billion total less the 4.29 billion advanced mandate), a portion of these D6 RINs will be unavailable for compliance due to ethanol exports and other non-compliance retirements.

Exports of denatured ethanol have averaged around 500 million gallons annually over the past 3 years. Through the first four months of 2018, 288 million gallons of denatured ethanol exports have been reported. This is more than double the amount of exports reported through April in 2017. Simply extending the current monthly pace of denatured ethanol exports through the end of the year results in an estimate of 690 million gallons exported for 2018.

Figure 2. Ratio of Monthly D6 RIN Generation to Mandate Requirement



## Summary

Data on RIN generation from EPA's EMTS through the first six months of 2018 indicates that the rate of gross generation of all categories of RINs is at or slightly above that experienced in 2017, and may be sufficient to meet compliance requirements for all but the cellulosic portions of the RFS mandates for 2018. However, the pace of RIN generation can fluctuate throughout the year. Furthermore, the pace of exports of biodiesel and denatured ethanol in 2018 has also exceeded those experienced in recent years. Exports and other non-compliance retirements will ultimately reduce the amount of 2018 RINs available for use towards mandate compliance. Future quarterly updates will continue to track RIN generation and biofuel export data to assess the ability of obligated parties to meet mandate requirements for 2018.

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