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Department of Agricultural and Consumer Economics, University of Illinois Urbana-Champaign

RIN Update: 2014 Carry In and EPA's Proposed Rulemaking

Nick Paulson

Department of Agricultural and Consumer Economics
University of Illinois

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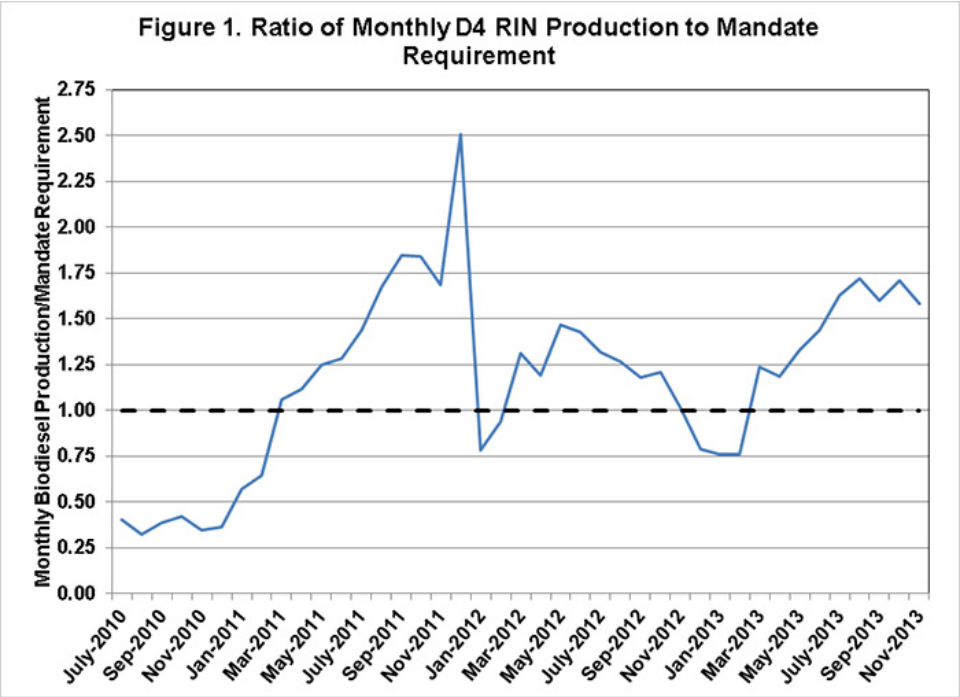
The EPA released proposed rules for the 2014 Renewable Fuel Standard (RFS) in November. The rules reduce both the total advanced and renewable mandate components, not only below the statutory levels for 2014 but also below the levels set for 2013. Previous posts from Irwin and Good and Meyer and Johansson have analyzed the impact of the reduced mandate volumes in the 2014 proposed rule. Today's post returns to the issue of RIN stocks, providing an update to RIN generation data for 2013 and carryover estimates for 2014, and discussing the implications of the proposed rules on 2014 RIN stock levels.

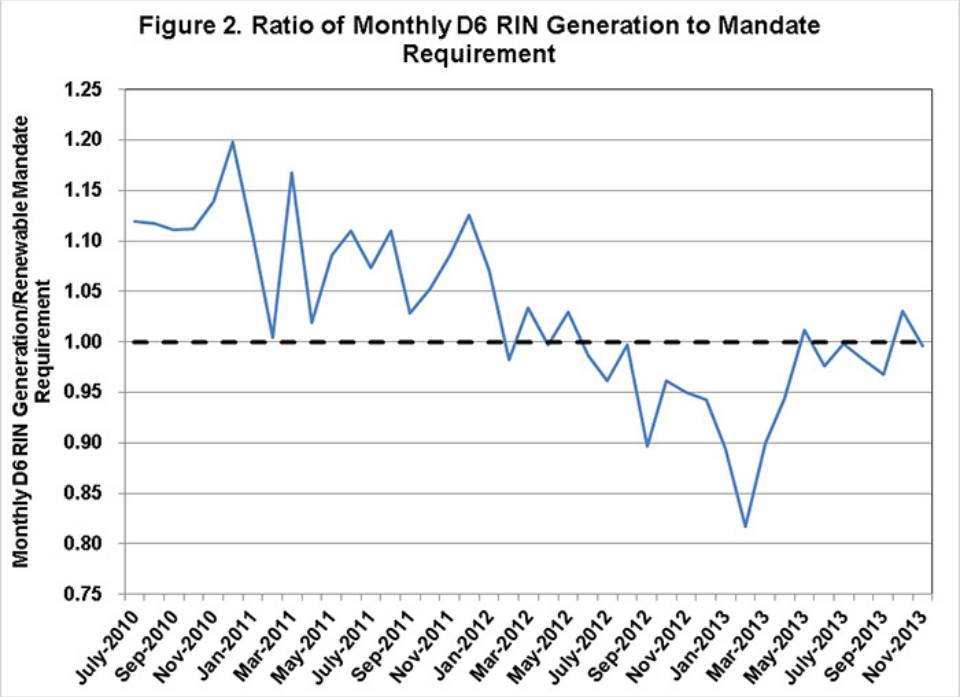
RIN Generation in 2013

Figure 1 uses data from EPA's EMTS to plot monthly D4 RIN generation relative to implied mandate needs (annual mandate/12) from July 2010 through November 2013. RIN generation has exceeded implied mandate needs for 2013 since March, following a pattern similar to that experienced under similar circumstances in 2011 as blender's provided incentives to increase biodiesel production to take advantage of a potentially expiring tax credit. Assuming a D4 RIN generation level of 260 million gallons for December, total D4 RIN generation is estimated to exceed 2.65 billion gallons in 2013.



Generation of D5 RINs peaked during the summer, averaging 70 million gallons per month from June through September. D5 RIN generation fell to 35 million gallons in October and just 23 million gallons in November. Assuming 30 million gallons are generated in December, total D5 RIN generation for 2013 is projected at just under 568 million gallons.

Figure 2 plots D6 RIN generation relative to implied mandate needs since July 2010. After spending the first quarter of 2013 behind the pace implied by renewable mandate needs, D6 RIN generation rebounded starting in May averaging 1.1 billion gallons per month for 2013. Assuming another 1.1 billion D6 RINs are generated in December, total D6 generation will reach approximately 13.2 billion gallons for 2013.



Estimating 2014 RIN Carry-In

Table 1 below compares the 2014 mandate levels originally outlined in the RFS legislation (statutory mandates) to those in the EPA's proposed rulemaking. The cellulosic mandate is once again reduced significantly from 1.75 billion gallons to 17 million gallons. The EPA is proposing to hold the biodiesel mandate at 1.28 billion volumetric gallons (1.92 billion RIN gallons), but reduce the total advanced mandate from 3.75 to 2.2 billion gallons. The renewable mandate – the portion towards which corn-based ethanol can be used for compliance – is reduced from 14.4 billion gallons to 13.01 billion gallons based on EPA's current estimates of the E10 blendwall.

Table 1. Statutory and Proposed RFS Mandate Levels for 2014

Biofuel Type	D-code	2014 Statutory Mandates	2014 Proposed Rulemaking
Cellulosic	D3	1.750	0.017
Biodiesel	D4	1.920	1.920
Undifferentiated Advanced	D5	0.080	0.263
Renewable	D6	14.400	13.010
Total Advanced	D3,D4,D5	3.750	2.200
Total	All	18.150	15.210

The EPA did not consider carryover RINs in setting the 2014 mandate levels in the proposed rules. While RIN carryover was considered in setting 2013 mandate levels, the EPA's decision to ignore RIN carryover levels for 2014 was justified by the notion that a buffer level of RIN stocks should exist to allow obligated parties the level of flexibility the RIN rollover provisions were meant to provide. Taken from page 71767 of the EPA's Proposed Rulemaking for 2014:

> "For 2014, however, if we accounted for all 1.2 billion carryover RINs in setting the applicable standards, obligated parties would be left with no flexibility for addressing other unforeseen circumstances. We believe that a standard-setting process that included an assumption that the carryover RIN balance would be reduced to zero would be contrary to the original intention of the provision for providing a degree of flexibility through carryover RINs. For this reason, we have not accounted for carryover RINs in our assessment of the reductions in the statutory volume requirements that would be appropriate in setting the RFS standards for 2014."

The 1.2 billion gallon RIN carryover number mentioned above was based on a total mandate for ethanol use (renewable plus advanced) of 14.5 billion gallons and an E10 blendwall level of 13.1 billion gallons. This implies a need for 1.4 billion in RIN stocks, of which 2.6 billion were estimated to be available for carryover by obligated parties in 2013. The difference is the 1.2 billion gallons in RINs that the EPA stated as the potential RIN carryover into 2014.

Table 2 provides estimates for 2014 RIN carry-in, or RIN stocks which are estimated to be available for rollover into 2014. These estimates are based on the projections for total RIN generation in 2013 discussed above in addition to the following assumptions:

- RIN carry-in for 2013 is based on the values provided in EPA's final rulemaking for 2013.

- Cellulosic RIN generation for 2013 is assumed to be just enough for mandate compliance so that D3 RIN stocks levels remain at zero.
- Based on EMTS data, not all RINs that are generated are ultimately used for mandate compliance. RINs can also be retired for other purposes such as exports. The *net* RIN generation values reported in table 2 are based on the assumption that 93% of the generated D4 RINs will be available for compliance, and 95% of the D5 and D6 RINs generated in 2013 will be available for compliance. These are based on historical EMTS data comparing RIN retirements for compliance purposes to total generation numbers.
- The 20% rollover limit is applied across D-codes based on the statutory and proposed mandate levels for 2014 (provided in table 1).

Two estimates for 2014 carry-in levels are provided in the final two columns of table 2. Both are based on the *potential* carry-in, estimated as 2013 carry-in plus net generation less the 2013 mandate level. Carry-in of advanced (D3, D4, and D5) RINs in 2013 was estimated at 549 million gallons. Approximately 3 billion advanced RIN gallons will be generated and available in 2013, implying a total of 3.549 billion advanced RINs which could be used to comply with the 2.75 billion gallon mandate. This implies potential carry-in of advanced RINs for 2014 of just over 800 million gallons. Similarly, the renewable RIN carry-in for 2013 (2.666 billion gallons) plus estimated D6 net RIN generation (12.579 billion gallons) less the 2013 renewable mandate (13.8 billion gallons) implies the potential carry-in of 896 million D6 RINs into 2014. Adding together the advanced and renewable categories yields an estimate of 1.7 billion gallons of RIN carryover into 2014, or 500 million more gallons than the level stated in EPA's justification of the mandate waivers in their proposed rules.

The final two columns provide estimates of the composition of the 1.7 billion gallons of RIN carryover after the 20% rollover provision is applied. The first set of estimates of limited carry-in use the statutory mandate levels for 2014. This implies that no more than 3.63 billion gallons (0.20*18.15) of RINs could be rolled over into 2014, and no more than 0.75 billion gallons (0.20*3.75) of advanced RINs. The total rollover limit exceeds the total potential carry-in of 1.7 billion gallons, but the advanced limit of 0.75 billion gallons is below the potential of 0.806 billion gallons of advanced RIN carryover. Thus, approximately 56 million advanced RINs may be rolled into 2014 but would have to be demoted for use towards the renewable component of the mandate resulting in an estimated total stock of renewable RINs for 2014 of 952 million gallons.

The second set of limited carry-in estimates applies the 20% rollover limits on the (lower) proposed mandate levels. Using the volumes in the proposed rules, the limit on total RIN carry-in (0.20*15.210 = 3.042 billion gallons) still exceeds the 1.7 billion gallon estimate, but the lower advanced mandate implies that only 0.44 billion gallons of advanced RINs will be rolled over for use as advanced RINs in 2014. The remaining advanced RINs could be rolled into 2014 but for use towards the renewable component, resulting in an estimated renewable RIN stock of 1.262 billion gallons for 2014.

Table 2. Estimates of 2014 RIN Carry-In (billion RIN gallons)

Biofuel Type	D-code	2013 Carry-in[1]	2013 Net Generation[2]	2013 Mandate	Potential 2014 Carry-in[3]	Limited 2014 Carry-In Statutory[4]	Limited 2014 Carry-In Proposed[5]
Cellulosic	D3	0.000	0.006	0.006	0.000	0.000	0.000
Biodiesel	D4	0.353	2.461	1.920	0.806	0.384	0.384
Undifferentiated Advanced	D5	0.196	0.539	0.824	0.000	0.366	0.056
Renewable	D6	2.117	12.579	13.800	0.896	0.952	1.262
Total Advanced	D3,D4,D5	0.549	3.007	2.750	0.806	0.750	0.440
Total	All	2.666	15.586	16.550	1.702	1.702	1.702

[1]Taken from EPA's 2013 Final Rule
[2]Projection of generation less retirement for non-compliance purposes such as exports
[3]Potential carry-in equals 2013 carry-in plus net generation less the 2013 mandate
[4]Limited carry-in applies the 20% rollover limit to potential carry-in based on the *statutory* 2014 mandate levels
[5]Limited carry-in applies the 20% rollover limit to potential carry-in based on the *proposed* 2014 mandate levels

Summary

The EPA's reduction of the RFS biofuel mandate volumes in their proposed rulemaking for 2014 have been highly controversial. In setting their proposed rules, EPA ignored RIN carryover explicitly stating that RIN stock levels should remain positive to allow for the flexibility the system was intended to provide. RIN carryover estimates for 2014 based on EMTS system data through November suggest that 1.7 billion gallons of RINs will be available for carryover into 2014. This is 500 million gallons more than the 1.2 billion gallon carryover level quoted in the proposed rulemaking.

While the proposed reductions should not limit the total estimated RIN carryover of 1.7 billion gallons, they could impact the composition of the RIN pool carried into 2014. Specifically, the reduction in the advanced component could significantly limit carryover of RINs that would be eligible for advanced mandate compliance in 2014 due to the 20% rollover limit provision.

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