

Summary of Interagency Working Comments on Draft Language under EO 12866 and EO 13563 Interagency Review. Subject to Further Policy Review.

EO 12866 Interagency Comments on U.S. Environmental Protection Agency (EPA) draft final rule titled, “Renewable Fuel Standard Program: Standards for 2020 and Biomass-Based Diesel Volume for 2021,” RIN 2060-AU42

- 1) Throughout the document the EPA takes in or creates its own projections for gasoline and distillate consumption, a wide range of renewable fuel production with a lengthy analysis of cellulosic biofuel production in particular, import volume trends of renewable fuel, trade-offs in feedstocks, carry-over RINS, the blend wall, refining capacity and finally rejection of the ACE remand. EPA then, in table *Table VII.C-1*, put a zero (0) in for *projected volume of gasoline for exempt small refineries* and *projected volume of diesel for exempt small refineries*, ensuring your projected totals are not met and all actual outcomes or resulting biofuel requirements are biased to one side, lower. This bias appears in outcomes for every requirement, including your cellulosic volume requirement which the court directed to you to have a ‘neutral’ estimate. You also draw a conclusion about the ability to achieve certain volumes with respect to the blend wall, while simultaneously ensuring that your calculated total is not the actual requirement, thus your requirement relative to the blendwall is wrong. The inconsistency ensures that the cellulosic outcome as well as every other requirement is biased. Further you reject the ACE court remand because you conclude there is no ‘room’ to incorporate it, knowing that the stated RVO will not be achieved because of the issuance, and lack of incorporation of, small refinery waivers.

Response:

The approach taken in this proposal is consistent with the approach first laid out in 2011 and followed since, and we have not proposed to revisit it. Whether to revisit this issue is a matter already under review at Agency leadership levels and we anticipate discussing it further while this action is under review.

- 2) Your change in language and interpretation of ‘Congressional intent’ to mean no growth in convention fuel rather than a broader and arguably more correct interpretation that it signaled a preference for advanced fuels over conventional fuels and a preference for both over petroleum products under the outlined constraints. Your self-imposed restriction of needlessly asserting that both the total and advanced mandates must be reduced by the same amount when using the cellulosic waiver authority, even though as you point out the court has given EPA broad authority in this area, gives preference to petroleum fuels over conventional biofuels, even if additional use of these fuels meets the objectives of the statute.

Response: It has been EPA’s longstanding interpretation that when making reductions under the cellulosic waiver authority it is appropriate to make equal reductions to the advanced biofuel and total renewable fuel volumes. See RFS 2017 Annual Rule, 81 FR 89746, 89753, and RFS 2018 Annual Rule, 82 FR 58486, 58492. EPA put forth this interpretation as early as 2009 and has consistently maintained this approach since that time. We continue to believe this interpretation best accomplishes Congressional intent. We note that beginning in 2015, all growth in the volumes established by Congress come from advanced biofuels.

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- 3) You continue to use an inappropriate cost estimate calculation that equates the value of the two products (gasoline and ethanol for example) purely on its energy content and double counts any policy effects which should appear in the cost calculations for those policies. You should be using a representative RIN price which corrects for all of these factors including octane value, state policies, federal policies, consumer choice and other issues. For example, your rejection of using RIN prices has argued that such a method does not include any effect of a blender's credit. This is true and appropriate, as the cost of the blenders credit should apply to that legislation, not to be double counted in this rule. Use of a representative RIN price would better reflect the marginal cost of inclusion of the last gallons of renewable fuel. Further, your costs of all of these various fuels does not incorporate the issuance of small refinery waivers, which again further biases your cost estimates higher.

Response: In this rulemaking, EPA follows the same methodology that we have used previously for estimating the costs of RFS annual standards. EPA continues to believe that the illustrative cost estimates of renewable fuels is the most appropriate way to estimate the costs of the RFS annual standards. EPA does not believe that RIN prices are a reliable measure of the costs of the RFS program. Among other reasons, EPA notes that market distortions such as tax credits (current or anticipated) can cause RIN prices to deviate from costs and that the ability for parties to bank RINs for use in the following year results in RIN prices reflecting both current and expected future marginal compliance costs. This is especially true in the case of cellulosic biofuels, which are the sole fuel at issue in our illustrative cost estimates in this rule. The cellulosic RIN price is highly influenced by the price of the alternative compliance mechanism, the cellulosic waiver credit. As shown in this rule the cost of production of CNG/LNG derived from biogas, the only fuel we project will increase as a result of this rule, are expected to be low, and potentially negative (a cost savings). Using the RIN price, which includes transfers, to estimate the cost of this fuel would be inappropriate. Finally, we acknowledge that the illustrative cost estimates do not account for the impacts of small refinery exemptions. The only RFS volumes used to estimate the illustrative costs are the 2019 and proposed 2020 volumes. No small refinery exemptions have been granted for these years.

- 4) Page 13. Section II-A-1. The statute does not require that EPA equal reductions in advanced biofuel and total biofuel. In fact, the statute explicitly states that the Administrator may also reduce applicable volumes of renewable fuel and advanced biofuels requirement ... by the same or lesser volume. EPA gives preference to non-renewables over non-advanced renewables without justification. An explanation of EPA interpretation is not provided in the rule and references throughout the rule circle back to this paragraph. EPA should consider reducing the Total Renewable fuel Volume by a lesser amount.

Response: See response to 2

- 5) Page 79 See overarching comment 1). These percentages should be adjusted to incorporate projected gasoline and diesel exempted through small refinery waivers to ensure consistency of your analysis throughout the document.

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Table VIII.C-2
Proposed Percentage Standards for 2020

Cellulosic biofuel	0.29%
Biomass-based diesel	1.99%
Advanced biofuel	2.75%
Renewable fuel	10.92%

Response: See response to 1

- 6) Page 13 top of page: EPA should note that domestic production of conventional ethanol would support a higher total volume, especially if trends in expanded infrastructure continue to expand markets for E15 and higher ethanol blends.

Response: It is unclear how the domestic production of conventional ethanol is relevant in Section II (page 13), which is about EPA's cellulosic and general waiver authority.

The domestic production of ethanol is a relevant factor in the potential supply of biofuels, however we are not proposing to reduce volumes on the basis of an inadequate domestic supply of biofuel. Nor are we proposing to exercise any other prong of the general waiver authority.

Under the cellulosic waiver authority, we determined that we should exercise our maximum discretion to require an attainable volume of advanced biofuel. Under the equal-reductions approach described in our answer to question 2, we then made an equivalent reduction in the total renewable fuel volume. This approach does not depend on the availability of conventional ethanol.

Further, we note that RINs are only valid for biofuels use as transportation fuel, heating oil, or jet fuel in the U.S. RINs generated for domestically produced ethanol that is exported must be retired to satisfy a renewable fuel exporter obligation. We do not expect that the E15 market will expand quickly enough to appreciably impact overall ethanol consumption in the U.S. in 2020. Our projections for Ethanol consumption are discussed further in the technical memo "Market impacts of biofuels in 2020."

- 7) Page 15 (text below): Except that under the current circumstance, your jump in RIN stocks is driven by your unaccounted for small refinery waivers. Then your analysis assumes a zero and thus you are not correctly assessing your Percent carryout, you are significantly under-estimating it.

EPA's approach to the consideration of carryover RINs in exercising our cellulosic waiver authority was affirmed in Monroe Energy and ACE.¹

Response: EPA's approach for the calculation of the carryover RIN bank is consistent with past RVO rulemakings, and we are not proposing to revise or otherwise reexamine this approach. In calculating the size of the RIN bank, we consider the aggregate numbers of RINs generated and retired. This aggregate data accounts for the effects of small refinery exemptions granted by EPA. For instance, page 16 states that "[t]his estimate ... includes the millions of RINs that were not required to be retired by small refineries that were granted hardship exemptions in recent years."

¹ *Monroe Energy v. EPA*, 750 F.3d 909 (D.C. Cir. 2014); *ACE*, 864 F.3d at 713.

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- 8) Page 14 (text below): Your action of a use of zero's in projecting small refinery waivers intentionally leads to an increase in the RIN stock under this definition.

....we are not proposing to set the 2020 volume requirements at levels that would envision an intentional drawdown in the bank of carryover RINs.

Response: See response to 7

- 9) Page 16 (text below) All of your items that could result in a smaller RIN bank are dwarfed by the issuance of small refinery waivers. We have seen this in the growth of RIN stocks over the last two years. This is the primary reason the RIN stock bank has grown and would likely drive continued growth.

In light of these uncertainties, the net result could be a bank of total carryover RINs larger or smaller than 11 percent of the proposed 2020 total renewable fuel volume requirement, and a bank of advanced carryover RINs larger or smaller than 8 percent of the proposed 2020 advanced biofuel volume requirement

Response: See response to 7

- 10) Page 12 (text below). To the use of a neutral aim with respect to cellulose as directed by the court, your failure to incorporate a projection for waived gasoline and diesel volumes from small refinery waiver ensures that your analysis in setting the cellulosic RVO is not 'neutral', in direct contravention to the courts direction.

In making this projection, EPA may not "adopt a methodology in which the risk of overestimation is set deliberately to outweigh the risk of underestimation" but must make a projection that "takes neutral aim at accuracy." (page 32) We believe that projecting overall production in 2019 in the manner described above results in a neutral estimate (neither biased to produce a projection that is too high nor too low) of likely cellulosic biofuel production in 2019.

Response: EPA's projection of cellulosic biofuel production in 2020, discussed in Section III of the draft NPRM, is independent of the small refinery exemption process and the process used to calculate the percentage standards. It would not be appropriate to artificially inflate our production of cellulosic biofuel production in an attempt to offset the impact of small refinery exemptions. Instead, these concerns should be addressed in the section discussing the proposed percentage standards (Section VIII). For more on this topic, see the response to 1.

- 11) Page 39 (text below) This statement below ignores the potential difference in RIN values between D6 (corn starch ethanol) and D5 (sugarcane ethanol).

.....and the fact that imported sugarcane ethanol typically costs more than corn ethanol create disincentives for increasing imports above the levels in recent years.

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Response: Text has been modified to acknowledge that the D5/D6 RIN price difference can influence the relative attractiveness to consumers of advanced ethanol compared to conventional ethanol, though there has been considerable variability in this particular RIN price difference over the last few years.

12) Page 54 (last paragraph). Here again, it isn't clear what your interpretation of the objective of the statute is. Your interpretation would suggest that even if it meets the overarching criteria of the statute, that 20% GHG reducing domestically produced ethanol would not be preferred over imported or domestic conventional petroleum based fuels which have no GHG reduction.

Response: See response to 2

13) Page 60 (text below) to overarching point 3) cost of production is not the relevant calculation (and even there you are doing a broad and inappropriate estimation).

These estimates are provided for the purpose of showing how the cost to produce a gallon of a "representative" renewable fuel compares to the cost of petroleum fuel.

Response: See response to 3

14) Page 67 (text below) this table should include an additional column which reflects the *effective* standard historically after accounting for small refinery waivers to more properly reflect RINs needed when comparing them to RINs available. You publish this data on your own website and it should be incorporated.

Table VII.B.1-1
Biomass-Based Diesel (D4) RIN Generation and Advanced Biofuel and Biomass-Based Diesel Standards in 2011-2019 (million RINs or gallons)²

	BBD RINs Generated	Exported BBD (RINs)	BBD RINs Retired, Non-Compliance Reasons	Available BBD RINs ^a	BBD Standard (Gallons)	BBD Standard (RINs)	Advanced Biofuel Standard (RINs)
2011	1,692	72	98	1,522	800	1,200	1,350
2012	1,737	102	90	1,545	1,000	1,500	2,000
2013	2,740	125	93	2,523	1,280	1,920	2,750
2014	2,710	134	93	2,483	1,630	2,490 ^b	2,670
2015	2,796	143	30	2,622	1,730	2,655 ^b	2,880
2016	4,009	202	51	3,756	1,900	2,850	3,610
2017	3,849	257	35	3,557	2,000	3,000	4,280
2018	3,860	245	39	3,576	2,100	3,150	4,290
2019	N/A	N/A	N/A	N/A	2,100	3,150	4,920
2020	N/A	N/A	N/A	N/A	2,430	3,645	5,010

² Available BBD RINs Generated, Exported BBD RINs, and BBD RINs Retired for Non-Compliance Reasons information from EMTS.

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Response: The purpose of Tables VII.B.1-1 and VII.B.1-2 is to demonstrate that BBD production and imports have consistently exceeded the BBD volume and have historically been driven by the advanced biofuel volume (with the exception of 2014 and 2015, when the RFS volumes were established retroactively at the actual volumes). This extra data is not necessary to make this point and adding more data to the tables could be confusing to the reader. Instead we have added a footnote to both tables noting that the BBD and Advanced Biofuel Standards in these tables are those used as the basis for calculating the percentage standards in the final rule and have not been retroactively adjusted for subsequent events, such as differences between projected and actual gasoline and diesel use and exempted small refinery volumes.

15) Page 71 (table below) In Table VI.B.1-2 for 2016 and 2017 your requirement is overstated due to small refinery waivers and will also be for 2018 and given this rule 2019. Therefore your calculation of ‘excess RINs’ in the last column is understated.

Table VII.B.1-2
Opportunity for and RIN Generation of “Other” Advanced Biofuels (million RINs)

	Opportunity for “Other” Advanced Biofuels ^a	Available Advanced (D5) RINs	Available BBD (D4) RINs in Excess of the BBD Requirement ^b
2011	150	225	322
2012	500	597	45
2013	829	552	603
2014 ^c	192	143	-7
2015 ^c	162	147	-33
2016	530	98	906
2017	969	144	557
2018	852	178	426

Response: See response to 14

16) Page 77 (text below). The current EPA process of granting exemptions with DOE data ensures that prior to the start of the year, when the EPA is required to set the standard, that none will have yet been issues. This ensures a bias and inconsistency in your analysis throughout. You also ignore that your own table calls the variable *projected* in both application and in your discussion.

The formulas in 40 CFR 80.1405 for the calculation of the percentage standards require the specification of a total of 14 variables covering factors such as the renewable fuel volume requirements, projected gasoline and diesel demand for all states and territories where the RFS program applies, renewable fuels projected by EIA to be included in the gasoline and diesel demand, and **projected** exemptions for small refineries. The values of all the variables used for this final rule are shown in Table VIII.C-1.³

Response: See response to 1

³ To determine the 49-state values for gasoline and diesel, the amount of these fuels used in Alaska is subtracted from the totals provided by EIA because petroleum based fuels used in Alaska do not incur RFS obligations. The Alaska fractions are determined from the June 29, 2018 EIA State Energy Data System (SEDS), Energy Consumption Estimates.

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- 17) Page 78 – Small Refinery Waivers: EPA’s methodology to account for exemptions is inconsistent with their approach to setting all of the other variables and factors used to calculate total volumes. EPA makes projections of gasoline and renewable fuels volumes, cellulosic production, CNG/LNG, carryover RINS, foreign sources, imported sugarcane, advanced biofuel, refinery capacity, etc. Given their approach to estimating other factors and variables, we recommend conducting an analysis based on expected conditions at small refineries and the historic issuance of exemptions. This would provide a more accurate estimate of volumes of gasoline and diesel for exempt small refineries. The numbers recommended below are based on EPA’s own historical reporting over 2016 and 2017.

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Table VIII.C-1
 Values for Terms in Calculation of the Proposed 2020 Standards⁴ (billion gallons)

Term	Description	Value
RFV _{CB}	Required volume of cellulosic biofuel	0.54
RFV _{BBD}	Required volume of biomass-based diesel	2.43
RFV _{AB}	Required volume of advanced biofuel	5.04
RFV _{RF}	Required volume of renewable fuel	20.04
G	Projected volume of gasoline	143.49
D	Projected volume of diesel	57.06
RG	Projected volume of renewables in gasoline	14.62
RD	Projected volume of renewables in diesel	2.48
GS	Projected volume of gasoline for opt-in areas	0
RGS	Projected volume of renewables in gasoline for opt-in areas	0
DS	Projected volume of diesel for opt-in areas	0
RDS	Projected volume of renewables in diesel for opt-in areas	0
GE	Projected volume of gasoline for exempt small refineries	7.5
DE	Projected volume of diesel for exempt small refineries	5.0

Response: See response to 1

The EPA should incorporate the ACE remand over three years (the RVO + the pending reset). This deals with the remand in a prospective fashion while limiting the impact in any given year and sending a signal to the market that it must incorporate this addition over several marketing years. At the same time, given the

⁴ See "Calculation of proposed % standards for 2020" in docket EPA-HQ-OAR-2019-0136.

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legislated increase in non-cellulosic advanced in 2022 and the likely need to meet some of this with biodiesel, it sends an appropriate market signal to increase the biodiesel mandate in 2021 to 2.6.

Ace Remand + Biodiesel Phase In

	2017	2018	2019	2020	2021	2022
Cellulosic	0.311	0.288	0.418	0.540	0.630	0.730
Biodiesel (in gallons)	2.000	2.100	2.100	2.430	2.600	2.770
<i>Biodiesel in RINs (in 1.55*gallons)</i>	3.100	3.255	3.255	3.767	4.030	4.294
Advanced	4.280	4.290	4.920	5.040	5.130	5.730
<i>Unspecified Advanced</i>	0.869	0.747	1.247	0.734	0.470	0.707
ACE Remand				0.075	0.175	0.250
Total	19.28	19.29	19.92	20.115	20.305	20.980
<i>Conventional Gap</i>	15.000	15.000	15.000	15.075	15.175	15.250

	2019 RVO
	2020 RVO
	Reset 2021-22

Response: As noted in the table above (provided by the commenter), increasing the BBD volume in 2021 would decrease the opportunity for unspecified advanced biofuels. EPA's proposed volume for 2021 would retain this space for unspecified advanced biofuel. In a future action to set the 2022 BBD volume, EPA could increase that volume if merited by our analysis of the statutory factors and continue to retain the opportunity for unspecified advanced biofuels. This issue and our response to the ACE remand are the subject of ongoing discussions.