Biotechnology Industry Organization

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Air and Radiation Docket and Information Center
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U.S. Environmental Protection Agency
Mailcode: 6406J
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Washington, DC 20460

Via email at A-and-R-Docket@epamail.epa.gov

Docket ID No. EPA-HQ-OAR-2012-0401: Regulation of Fuels and Fuel Additives: RFS Pathways II and Technical Amendments to the RFS 2 Standards

The Biotechnology Industry Organization ("BIO") is pleased to comment on the U.S. Environmental Protection Agency's ("EPA") Proposed Rule on "Regulation of Fuels and Fuel Additives: RFS Pathways II and Technical Amendments to the RFS 2 Standards" ("the proposed rule").[1]

I. Introduction

BIO is the world's largest biotechnology organization, with more than 1,100 member companies worldwide. BIO represents leading technology companies in the production of conventional and advanced biofuels, feedstocks, renewable chemicals and other sustainable solutions to energy and climate change. BIO also represents the leaders in developing new crop technologies for food, feed, fiber, and fuel.

These companies are developing new and innovative ways to help fuel America and the world; providing more environmentally friendly energy crops, cleaner burning biofuels and renewable chemicals that help reduce greenhouse gas emissions and provide more sustainable sources of energy and materials. Achieving our nation's goals of less dependence of foreign sources of oil and cleaner fuels will require our economy to transition

[1] Environmental Protection Agency, Regulation of Fuels and Fuel Additives: RFS Pathways II and Technical Amendments to the RFS 2 Standards, EPA–HQ–OAR–2012–0401, 78 Fed. Reg. 36,042 (proposed June 14, 2013) (to be codified at 40 CFR Part 80), available at http://www.gpo.gov/fdsys/pkg/FR-2013-06-14/pdf/2013-12714.pdf [Hereinafter "The Proposed Rule"]

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to sustainable energy resources and higher levels of energy efficiency. The companies BIO represents are developing innovative biobased fuels, products, and processes that will enable our economy to achieve these objectives.

Toward this end, federal policy and regulations – including the proposed rule as well as the EPA's consistent support and implementation of the federal Renewable Fuel Standard (RFS) – play an important role in helping to drive the commercialization of these technologies. The importance of federal policy is particularly critical in the transportation fuel sector. The U.S. transportation system is overwhelmingly and unsustainably reliant on petroleum fuels. These traditional fuels are a large component of the U.S. greenhouse gas (GHG) emissions inventory and our overdependence on foreign sources of energy. Rapid transition to more alternative transportation fuels is essential to meeting the Administration's plans to cut carbon pollution[2] by reducing GHG emissions and U.S. reliance on foreign sources of energy.

In order to fully develop these alternative transportation fuels, approval of additional renewable fuel production pathways and pathway components under the RFS is crucial. BIO applauds EPA's approval earlier this year of additional pathways under the RFS for camelina oil and energy cane, along with renewable gasoline and renewable gasoline blendstock made from certain qualifying feedstocks;[3] and its approval earlier this month of biofuels produced from Arundo donax (giant reed) or Pennisetum purpureum (napier grass).[4]

BIO welcomes this proposed rule as a further step towards meeting the aggressive volume targets under the RFS. BIO believes that, if the proposed rule is properly tailored,

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[2] Executive Office of the President, The President's Climate Action Plan, June 2013, page 8, available at http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf

[3] Environmental Protection Agency, Regulation of Fuels and Fuel Additives: Identification of Additional Qualifying Renewable Fuel Pathways Under the Renewable Fuel Standard Program, EPA–HQ–OAR–2011–0542, 78 Fed. Reg. 14,190, March 5, 2013 (to be codified at 40 CFR Part 80), available at http://www.gpo.gov/fdsys/pkg/FR-2013-03-05/pdf/2013-04929.pdf

[4] Environmental Protection Agency, Regulation of Fuels and Fuel Additives: Additional Qualifying Renewable Fuel Pathways Under the Renewable Fuel Standard Program; Final Rule Approving Renewable Fuel Pathways for Giant Reed (Arundo Donax) and Napier Grass (Pennisetum Purpureum), 78 Fed. Reg. 41703, July 11, 2013 (to be codified at 40 CFR Part 80), available at: http://www.gpo.gov/fdsys/pkg/FR-2013-07-11/pdf/2013-16488.pdf

the final rule has the potential to encourage the expanded development of cellulosic and advanced biofuels. Below, BIO provides context for our comments on specific provisions in the proposed rule. While BIO has some areas of concern with the proposed rule, overall BIO believes the proposed rule will help to continue the development of the cellulosic and advanced biofuels industry.

II. Comments and Suggestions on the Proposed Rule

a. *Approving Cellulosic Volumes From Cellulosic Feedstocks*

BIO supports EPA's proposal to approve fuels as cellulosic biofuels "where the cellulosic components account for a predominant percentage of the biogenic material in the renewable biomass feedstock used to produce the fuel." This interpretation is consistent both with industry terminology and with precedent, as cited by EPA in the proposed rule.[5]

BIO supports EPA's proposal that biofuel made from crop residue; slash; pre-commercial thinning and tree residue; annual cover crops; switchgrass; miscanthus; energy cane; napier grass; Arundo; and future cellulosic pathways be able to generate applicable RINs for 100 percent of the volume of renewable fuel.[6]

BIO believes an analogous predominant content approach may also have merit for RIN generation by other previously approved feedstocks. In particular, BIO asks that EPA consider a predominant content approach to RIN generation for separated municipal solid waste (MSW). BIO believes separated MSW offers among the greatest environmental benefits of any available feedstock. But EPA's current approach risks impeding the development of separated MSW projects by requiring such projects to remove 100 percent of residual plastic in the MSW stream in order to generate RINs for 100 percent of the volume of renewable fuel produced.[7] In the case of MSW projects employing best available

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[5] *Id.* at 36047
[6] *Id*. at 36047
[7] *Id*. at 36046

separation technology, this residual plastic has no market value and would otherwise go to land fill. Under EPA's current approach, MSW project developers are unable to generate RINs for a portion of their fuel, even if they employ best available separation technology. This risks significantly disadvantaging cellulosic biofuel production from MSW. BIO asks that EPA consider allowing MSW projects employing best available separation technology to generate RINs for 100 percent of the renewable fuel produced under a predominant content approach analogous to that in the proposed rule. Such an approach has already been adopted in the case of separated yard waste.[8]

EPA seeks comment on two alternative approaches to assigning cellulosic RINs to fuels produced from the cellulosic feedstocks discussed above. One approach would be for EPA to set a minimum threshold of cellulosic contents in the feedstock. Another approach is for a specified percentage approach.[9] BIO would recommend EPA refrain from setting a specific minimum percentage threshold at this time. BIO is not aware of any consensus scientific or industry minimum cellulosic threshold. And, as EPA notes, in the future, the agency "may address biofuels that are produced from feedstocks that contain lower cellulosic content than those discussed in this rulemaking."[10] Such future feedstocks may result in outstanding GHG reductions, or other desirable characteristics, and should not be excluded based on an arbitrary minimum percentage of cellulosic content. Indeed, the cellulosic feedstocks approved by EPA to date have generally greatly exceeded the required 60 percent reduction in GHGs.

Rather than selecting a minimum percentage now that may inadvertently stifle development of beneficial new feedstocks in the future, EPA should maintain the flexibility inherent in its proposed predominant proportion approach, at least until such time as a scientific or industry consensus emerges. If EPA does elect to establish a minimum content

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[8] *Id*. at 36046
[9] *Id.* at 36047-36048
[10] *Id.* at 36048

threshold, BIO urges EPA to set the minimum at the lowest possible threshold within the proposed range, to encourage the maximum possible development of cellulosic biofuels. BIO supports EPA's suggestion that fuels produced using biochemical processes be eligible to generate RINs for 100 percent of the fuel produced even in the case of feedstocks with lower cellulosic content.

With regards to the specified percentage alternative, BIO strongly opposes this approach. As noted previously, there is no evidence Congress intended cellulosic biofuels be made exclusively from cellulosic components. Allowing only 85 percent of fuel generated from cellulosic biomass to qualify for cellulosic RINs would have the perverse effect of increasing the amount of biomass – and the resources needed to produce the biomass –to generate the cellulosic volumes set out by the program. It is strongly preferable that EPA adopt the proposed approach of assigning cellulosic RINs to 100 percent of the volume generated from qualifying cellulosic feedstocks.

b. *Lifecycle Greenhouse Gas Emissions Analysis for Renewable Electricity, Renewable Diesel and Naphtha Produced from Landfill Biogas*

EPA received several facility-specific petitions under Section 80.1416 to allow renewable electricity, renewable diesel, and naptha produced from landfill biogas ("New Gas-Electric Pathways") to qualify as renewable fuels under the RFS program. In evaluating these petitions, EPA prepared lifecycle analyses of these pathways, which involved certain assumptions pertaining to utilization of landfill biogas in these pathways.[11]

The proposed rule estimates lifecycle GHG emissions for various pathways with landfill biogas as the feedstock. For each of the proposed pathways, EPA proposes to use landfills that flare their biogas as the baseline. In so doing, EPA notes that if small, unregulated landfills were to capture and use their biogas in transportation fuels, "this would result in significantly greater reductions in GHG emissions at each landfill than

[11] *Id.* at 36048

assumed for landfills already capturing biogas because of the decrease in methane release, so that biofuels produced from such facilities would easily meet the required emissions reduction thresholds."[12]

BIO has no objection to the proposed approach for the proposed pathways. However, BIO strongly disagrees with EPA's assertion that "small, unregulated landfills would be unlikely to generate enough biogas to justify collecting it for conversion to renewable fuels."[13] While this may be true for direct conversion of biogas to renewable fuels, such as CNG or LNG, sufficient biogas could certainly be collected from small, unregulated landfills to provide some heat or power to facilities producing biofuels from other feedstocks such as grains. BIO urges EPA to provide full credit for methane reduction in its lifecycle GHG calculations for projects utilizing biogas from small, unregulated landfills. For example, in the case where there is no flaring requirement by applicable regulation, if the conversion of biogas would not have been created without the relationship with the renewable fuel production facility, the source of the biogas and its related methane destruction credits should be considered for lifecycle GHG calculations to meet advanced biofuels requirements. This could be the case for a number of biofuel facilities located near smaller landfills which are not required to vent their methane.

Given that the location of these facilities are often in rural areas and closer to smaller communities, which would have landfills that are exempt from requirements to collect and flare methane, giving credit to biofuel facilities who enter into such agreements would help encourage greater collection of the 24 percent of the nation's methane not being flared off and help these facilities qualify for cellulosic or advanced biofuels.

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[12] *Id.* at 36049
[13] *Id.* at 36049

c. *Proposed Regulatory Amendments Related to Biogas*

BIO does not take issue with EPA's proposal to allow biogas to qualify for RINs in the proposed rule. As previously stated, the timely approval of additional pathways is vital to achieving the ambitious goals of the RFS. However, EPA should seek first to divert waste from landfills by allowing waste that qualifies as cellulosic to qualify for RINs. By keeping waste out of a landfill, the harmful GHG emissions associated with decomposition of biomass in a landfill would be significantly reduced.[14]

In the case where qualifying biogas is comingled with natural gas – which is frequently the case for transportation fuel - we recommend the final rule require the fuel to be carbon 14 tested and subject to the proposed predominance threshold.

d. *Consideration of Advanced Butanol Pathway*

EPA is proposing to add a new pathway that allows butanol made from corn starch using a combination of advanced technologies to meet the 50 percent GHG emissions reductions to qualify as an advanced renewable fuel. BIO supports this new pathway.[15]

EPA also seeks comments on the obstacle biobutanol has to enter the commercial market due to Reid Vapor Pressure (RVP) rules it encounters. In the propose rule, EPA proposes adjusting the RVP requirement when E10 is comingled with biobutanol blends (Bu12). Allowing Bu12 to blend with E10 under RVP will allow year round use of biobutanol. BIO supports this proposal. BIO would also encourage EPA to consider adopting a similar approach to E15 to facilitate more renewable fuel use. BIO understands EPA is not currently able to do so under the Clean Air Act, and the Agency has stated this is something that will have to change. However, we foresee future complications if EPA were to continue to treat E10 and E15 differently and would encourage the Agency to examine the impact to the fuels market by treating E10 and E15 differently under the One-Pound Waiver.

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[14] *Id.* at 36053
[15] *Id.* at 36058

e. *Proposed Changes to Section 80.1466 – Require Froeign Ethanol Producers, Importers and Foreign Renewable Fuel Producers That Sell To Importers to Be Subject to U.S. Jurisdiction and Post a Bond*

BIO supports EPA's efforts to ensure that foreign ethanol producers who do not generate RINs for their product and importers of renewable fuel be subject to the same rules and regulations of domestic producers and be required to comply with the safeguards of section 80.1466 to ensure RINs entering the U.S. are valid.[16] As EPA finalizes these procedures, we would encourage the Agency to ensure its enforcement of the rule does not inadvertently discourage legitimate feedstocks and fuels developed by producers who are already complying with section 80.1466 from being able to import to the U.S. Doing so may unintentionally impact domestic producers who use these feedstocks or fuels from developing domestic gallons of advanced or cellulosic biofuels.

III. Conclusion

The pathways in the Proposed Rule for advanced and cellulosic biofuels have the potential to contribute significantly to the ability to meet the cellulosic and advanced biofuels volumetric targets under the RFS, which will help increase U.S. energy security and reduce harmful GHGs. BIO strongly encourages EPA to allow 100 percent of the volume of renewable fuel produced from specific cellulosic feedstock sources to qualify for 100 percent cellulosic RINs, and to consider re-evaluating its approach to RIN generation for separated MSW using an analogous approach. BIO also encourages the agency to look at biofuel facilities utilizing landfill gas from landfills not required to flare off methane, on a case-by-case basis, to see if they are contributing to greater GHG reductions versus a baseline assumption of flaring off methane gas.

As for biogas qualifying for RINs, BIO does not take issue, so long as the production of biogas must meet the same requirements as cellulosic feedstock users. Finally, BIO supports EPA approving butanol made from corn starch using a combination of advanced

[16] *Id.* at 36065

technologies to meet the 50 percent GHG emissions reductions to qualify as an advanced renewable fuel. BIO encourages EPA to adjust the RVP requirements for E10 to be utilized with Bu12, and to consider similar action for butanol blended with E15.

BIO and its members look forward to working with EPA and the affected parties of this rulemaking to ensure implementation of a pathway rule that promotes the continued development of the biofuels industry as expressed in these comments.

Thank you for your consideration of these comments.

Sincerely,

Brent Erickson,
Executive Vice President
Industrial & Environmental Section