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February 10th, 2023

EPA-HQ-OAR-2021-0427
US Environmental Protection Agency
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Submitted electronically via www.regulation.gov

RE: Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes

BP America Inc. (bp),¹ is pleased to submit comments in response to EPA's proposal for the applicable volumes and percentage standards for 2023 through 2025, the proposed regulatory changes to prescribe how RINs from renewable electricity (eRINs) would be implemented and managed under the RFS program, and other modifications.

About bp

bp has a 150-year history in America and is committed to the US for the long term. bp has a larger presence in the United States than anywhere else in the world, with every major bp global business represented. Among our more than 65,000 employees in over sixty-five countries, more than 12,000 work in the US. We have invested more than \$135 billion here since 2005 and bp's business activities support nearly a quarter million American jobs, contributing about \$60 billion to the national economy in 2021.

bp seeks to provide the world with secure, affordable, and lower carbon energy. bp's purpose is to reimagine energy for people and our planet. Our ambition is to become a net-zero company by 2050 or sooner, and to help the world get there too. As another part of this ambition, we plan to make major investments in lower carbon energy. In the United States, we most recently accelerated and expanded in bioenergy through the acquisition of leading US renewable natural gas (RNG) provider Archaea Energy.² This acquisition expands our presence in the US biogas industry, enhancing our ability to support customers' decarbonization goals and progresses our aim to reduce the average lifecycle carbon intensity of the energy products we sell.

bp has been an active participant in the RFS program since its inception as an obligated party, a biofuels blender, a biogas provider, and a RIN marketer.

¹ bp America Inc. is a subsidiary of bp plc. "bp" is used interchangeably herein to refer to BP America, plc, another subsidiary, or the group of companies collectively.

² https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-accelerates-and-expands-in-bioenergy-agreeing-to-buy-leading-us-biogas-company-archaea-energy.html?dm_i=53XH,NT30,17MCNN,2VK8L,1

bp recognizes the tremendous work and effort put into this proposed set rule. bp's primarily fall comments fall into three areas:

- 1) bp supports finalization of the electricity pathway (eRINs). Within the proposed eRIN program design, we offer a few suggestions for making the program more achievable, durable, and scalable.
- 2) bp believes the proposed volumes in the Cellulosic and Advanced categories may underestimate actual expected category growth.
- 3) bp supports efforts to make the RFS more reflective of emerging technologies and transportation end uses for biofuels, such as Sustainable Aviation Fuel and hydrogen produced from renewable biomass.

Additionally, bp offers EPA recommendations on its approaches to recordkeeping for food waste, defining what is "produced from renewable biomass," biogas production limitations, and biogas continuous monitoring requirements.

bp supports finalization of the electricity pathway (eRINs) and makes suggestions for making the program more flexible, durable, and scalable.

bp applauds EPA for its proposed finalization of the eRIN pathway—a pathway that EPA first approved in 2014. bp believes that EPA should not further delay the promulgation of the eRIN pathway and should not separate its consideration into a separate rulemaking. We believe that the implementation of the program, as currently scheduled, aligns with EPA's stated policy goal "to support the RFS program's mandate to increase the use of renewable fuels...."

While bp supports a timely finalization of the eRIN pathway, bp recommends a few points of clarification that can help the program succeed in the near term and that, in the long term, can further the stated goal of increasing the use of renewable fuels in the transportation sector.

First, bp recommends that EPA clarify that, as the sole generators of the eRINs, Original Equipment Manufacturers (OEMs) can designate third parties to act on their behalf in marketing the eRINs. EPA can clarify this in the final rule. Such an allowed action would be consistent with similar business models in other RIN categories, including for existing Cellulosic RIN generators. This model would carry the same capabilities for pathways that exist today for RNG that serves the transportation sector.

EPA can also help increase eRIN program function through allowing qualifying renewable electricity providers to contract with more than one OEM for offtake agreements. This one-to-one issue can be restrictive and even limit the potential for eRIN participation. As currently proposed, the program would restrict a facility, regardless of total annual electricity generation, to contract with only one OEM customer. This restriction is particularly material for large combined cycle natural gas plants that can generate a significant amount of electricity from RNG. In this instance, a capable combined cycle plant would be likely to generate more electricity from RNG than a single OEM needs for its annual eRIN generation, and thus the extra RNG electrons would not be able to participate in the RFS without the ability to find another offtake.

If a qualifying renewable electricity facility could contract with more than one OEM this would allow for balancing across the program in the case of possible over contracting of eRIN supply due to contingencies like EV sales forecasting errors. bp recognizes the care and concern from EPA to ensure program transparency. We suggest that EPA leverage the Quality Assurance Plan (QAP) process in this instance and allow for a qualifying generator to contract with more than one OEM if it goes through the QAP. This adjustment would bring the eRIN program more closely aligned with other existing RIN categories.

EPA asks for comment on the proposed framework for linking renewable electricity produced from qualifying biogas to transportation use. bp appreciates the recognition of the complexity of the electricity markets and commends EPA for not limiting eRIN generation to charging events occurring via closed non-commercial systems.³ bp suggests that EPA also allow the use of Renewable Energy Credits (RECs) to back biomass-based generation in the eRIN program. As currently proposed, the qualifying renewable energy facility would need to transmit each generator's electricity production to the OEM, either manually or through some new communication system. In contrast, the well-established REC tracking systems or registries use the existing revenue-grade electric meters and meter data that is concurrently used for generator billing and payment. Allowing the OEMs to leverage these REC registries would also provide greater transparency, assist with tracking, and facilitate compliance. For these reasons many qualifying renewable energy facilities already generate and use RECs for various compliance or voluntary programs. Furthermore, the use of REC registries could enhance scalability in the EPA's eRIN program.

bp also believes that the EPA should expand its eRIN program to include Medium and Heavy-Duty Vehicles (MHDVs) at the earliest opportunity. It could do so using the same methodology proposed for light-duty vehicles, identifying the fleet of OEMs and making comparable Vehicle Miles Travelled (VMT) estimates. Including MHDVs in the program would align with the overall goals of the RFS and the eRIN pathway. Further, most MHDVs are part of commercial fleets that may keep detailed VMT records, making accurate VMT estimates even simpler.

bp recommends that EPA set the volume obligations in the Cellulosic and Advanced categories at a level that reflect expected category growth.

bp supports volume obligation numbers that are both realistic and reflective of category growth. bp also supports EPA's use of a three-year compliance schedule rather than aiming to set targets annually. A multi-year approach can help bring more transparency and predictability for compliance entities. However, bp believes that the volume obligations and growth rates in the Advanced and the Cellulosic categories are too low.

bp recommend that EPA set targets that more closely align with expected category growth in these categories.

bp believes that in setting the Cellulosic category growth rates, EPA set the growth rate too low. EPA relied on conversion rates rather than focusing on an increasing demand side. bp recommends that EPA set a Cellulosic growth rate based on expected growth in demand for RNG as demonstrated by production projections, rather than expectations of conversions to

³ Proposed rule at 80649, <https://www.govinfo.gov/content/pkg/FR-2022-12-30/pdf/2022-26499.pdf>

RNG in fleets. EPA should anticipate fleet types utilizing RNG may expand, contributing to higher demand. In meeting category growth, conversion technology investment and projects may increase to provide needed supply.

Within the Cellulosic category, to assist new project startup and expediting the EPA pathway approval process and associated QAP certification, EPA should consider a process that simplifies and expedites approvals. EPA should work with QAP providers to create an approach that allows for D3-K1 prior to Q-status to be retroactively applied while awaiting QAP approval. In addition, storage of initial production volumes should be allowed for new projects for up to 90 days.

Beyond the Cellulosic category increases, EPA should also further increase set volume targets in the Advanced category to reflect expected increases in Renewable Diesel (RD) and Sustainable Aviation Fuel (SAF) supply and use, supported by advances in feedstock production and pre-treatment. Not only are there several announced capacity additions coming online in the next few years, but the Biden administration has also clearly called for increasing demand in this space.

The SAF Grand Challenge calls for three billion gallons of SAF by 2030, which could require 365mgal of SAF capacity additions each year. Using the 1.6 equivalence value, which translates to growth of 600 million RINs each year, compared to the roughly 100 million RIN increase EPA has programmed once expected ethanol and cellulosic volumes are deducted from the total program volumes.

Furthermore, the recently released “U.S. National Blueprint for Transport Decarbonization” “estimates that over 50 billion gallons of sustainable biofuels (80% or more GHG emissions reduction) can be cost-effectively produced domestically by leveraging multiple production pathways.”⁴ The Blueprint points to the need for these sustainable liquid fuels across a range of hard to decarbonize transportation demands like aviation, marine, rail, and long-haul trucking.

Advanced biofuels need a strong signal from all the existing programs to continue to grow. It is therefore important that multi-year RVO rulemaking align properly with the overall ambition for biofuels in supporting the national decarbonization goals.

Given that multi-year RVO setting carries risk in reflecting conditions the further out they go, bp would support that the 2026 volumes be considered as part of a separate rulemaking to strike the right balance between regulatory certainty and appropriate RVO targets.

EPA also proposes changes that may affect existing biodiesel and renewable diesel market practices. bp does not support additional limitations to RIN separation and transactions as there are well-established business practices market participants use to manage volumes and risk which benefit from a flexible approach to physical volume and RIN transactions.

bp supports efforts to make the RFS more reflective of emerging technologies and end uses for biofuels, such as increased incorporation of Sustainable Aviation Fuel (SAF) and hydrogen produced from renewable biomass.

⁴ <https://www.energy.gov/sites/default/files/2023-01/the-us-national-blueprint-for-transportation-decarbonization.pdf> Pp. 54

bp commends the EPA for its inclusion of several areas of comment about the role of the RFS to better incorporate emerging technologies and end-uses for biofuels. bp looks forward to working with EPA as it contemplates pathways to increase participation of Sustainable Aviation Fuel (SAF) and hydrogen derived from biomass-based feedstocks.

bp appreciates EPA's request for comments on better incorporating SAF and qualifying hydrogen into the program. EPA asks, "What role can the RFS program play, beyond what exists today, to further support the development of sustainable aviation fuel?"⁵ bp believes there are several areas for the RFS to be more inclusive of biomass produced SAF.

- Expedite Pathway Approvals. EPA has currently approved pathways for jet fuel produced using hydrotreating (Pathways F-H), cellulosic biomass (Pathways L-M), or non-cellulosic portions of food waste and cover crops (Pathway P) 40 C.F.R. § 80.1426 Table 1. However, petitions for additional pathways remain pending before the agency. EPA could prioritize devoting additional resources to evaluating SAF pathway petitions to prevent delay in SAF production.
- SAF Credit Multiplier. Adding a credit multiplier to the RFS could allow the program to prioritize certain fuel types, such as SAF. The Corporate Average Fuel Economy (CAFE) Standard uses a similar approach to incentivize the transition to electric vehicles, by counting each EV sold in US markets as up to two vehicles when calculating manufacturer fuel economy. In addition, Europe's REDII program incorporates a 1.2 times multiplier for SAF produced from advanced feedstocks. EPA could even consider how a possible separate SAF carveout within the D5 advanced category could incentivize production.
- Book-and-Claim Crediting Mechanisms. EPA should allow a RIN category (e.g., Advanced vs. Conventional) assigned to SAF pathways to include book-and-claim accounting. As a supplement to other incentives, the inter-agency SAF Roadmap recommends the use of book-and-claim accounting to accurately credit the climate benefits of SAF production pathways.⁶ Book-and-claim allows entities to use contractual agreements to demonstrate use of low-carbon fuel sources that are distributed through a shared network—such as a commercial pipeline—where the low-carbon and conventional fuel cannot be physically separated.

On hydrogen, EPA asks "are there steps EPA should consider taking under the RFS program to capture opportunities related to hydrogen derived from renewable biomass?"⁷ . bp has several recommendations for EPA's consideration as it contemplates a roadmap to more hydrogen inclusion in the program. Facilities that produce hydrogen for use in the transportation sector, where such hydrogen is produced from renewable natural gas, should be able to generate RINs.

- If the hydrogen is used as a feedstock to produce sustainable hydrocarbon fuels (e.g., renewable diesel), then the improvement in lifecycle carbon intensity of the

⁵ Proposed rule at 80587, <https://www.govinfo.gov/content/pkg/FR-2022-12-30/pdf/2022-26499.pdf>

⁶ "SAF Grand Challenge Roadmap." Pp. 51, <https://www.energy.gov/sites/default/files/2022-09/beto-saf-gc-roadmap-report-sept-2022.pdf>

⁷ Proposed rule at 80587, <https://www.govinfo.gov/content/pkg/FR-2022-12-30/pdf/2022-26499.pdf>

hydrocarbon fuel should be recognized when determining if the product qualifies for the advanced RIN category.

- If the hydrogen facility produces hydrogen for use in transportation from a blend of renewable natural gas and fossil natural gas, then the appropriate proportion of hydrogen produced should be eligible to generate RINs (e.g., the renewable natural gas should be “mass balanced” into the hydrogen produced).
- If the hydrogen facility produces hydrogen that is used for multiple end-uses, including transportation, then the proportionate amount of hydrogen used in the transportation sector should generate RINs.

bp encourages EPA to avoid undue complexity in defining what is “produced from renewable biomass.”

bp appreciates EPA’s work to provide a clear definition of “produced from renewable biomass” to give more certainty for emerging technologies. However, we are concerned that EPA’s proposal adds new complexity, which overlaps with existing approaches for equivalence values and GHG lifecycle assessment. We believe Congressional intent was straightforward and that any fuel with much of its weight and/or mass derived from renewable biomass would qualify. We encourage EPA to maintain a broad and flexible approach to this definition which allows the greatest number of technologies to compete for RFS participation, using GHG lifecycle performance and equivalence value calculations as the analytical tests for qualification and awarding RINs.

- With respect to EPA’s proposal for new regulatory provisions and modifications to the existing 80.1426(f)(4) that would be consistent with the proposed definition of produced from renewable biomass, bp would wish to highlight that co-processing through a hydrotreater receives its energy from both fossil-based hydrogen and the renewable feedstock.
- ¹⁴C testing determines the volume in gallons to qualify for RINs, ¹⁴C only accounts for the renewable carbon, and not the hydrogen molecule from the renewable feedstock, so the volume is undercounted, and not generating as many RINs as it could.
- Since the RIN gallon calculation does not include the renewable volume from hydrogen, and the energy input from the fossil hydrogen is not from biomass, a possible solution is to keep equivalence value at 1.7 to broadly account for both.
- Should EPA proceed with a revised definition of co-processed intermediate to mean “a fuel or intermediate that contains energy from both renewable biomass and non-renewable biomass,” it would have the effect of including a much larger universe of renewable diesel producers than under the present scenario, as standalone producers would fall under the definition of co-processor with implications for D-Code classification. Likewise other fuels such as biodiesel generally include non-renewable biomass feedstocks. We do not believe this interpretation is consistent with Congressional intent.

bp supports EPA’s calibrated effort to advance recordkeeping requirements for certain feedstocks

bp also appreciates EPA's effort to find an effective solution for separated food waste recordkeeping and would encourage EPA to avoid any requirements above what is currently required for California's LCFS program. This will help maximize the potential impact of the RFS program and encourage the use of lower carbon intensity feedstocks.

bp recommends that EPA follow industry standard in continuous monitoring for biogas facilities

For continuous monitoring, bp recommends that EPA allow for one-minute record frequency. This frequency is currently used in the industry and can detect flow rate ramping associated with facility startup and shutdown, as well as large swings in the flow that can be associated with TSA or PSA systems. The proposed data collection requirements (every 15 minutes for in-line GC meters, every six seconds for flow meters, and every two seconds for all other meters) may add additional burdens to biogas facilities. These additional hurdles, if implemented immediately, may run up against data storage limitations and challenges. bp thus recommends that EPA allow for continuous monitoring to occur at the one-minute interval.

bp recommends that EPA remove its proposed restrictions on supply destinations for biogas producers.

bp believes that there are ways to ensure that no double counting of biogas volumes is occurring without placing constraints on biogas producers, and subsequently, processing facilities. One solution is to ensure there is metering of the feedstock to Electric Generating Units (EGU) and RNG upgrading systems on site and to the flare. The Q-RIN provider could confirm volumes that went to Flare, EGU and RNG and therefore verify no biogas was double counted.

Conclusion

bp appreciates the opportunity to provide these comments to EPA, and we look forward to sharing further insights on future rulemakings. Please feel free to contact me at Downey.Magallanes@bp.com if you have any questions, or feel free to contact Jeffrey Stein at Jeffrey.Stein@bp.com, or Tom Miller at Thomas.E.Miller@bp.com.

Sincerely,

/s/ Downey Magallanes

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