



BRAZILIAN SUGARCANE INDUSTRY ASSOCIATION

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VIA ELECTRONIC MAIL (a-and-r-docket@epa.gov)
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Air and Radiation Docket and Information Center Environmental Protection Agency
Mailcode 2822T
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

RE: UNICA's Comments on "Renewable Fuel Standard Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019; Proposed Rule," 82 Fed. Reg. 34,206 (July 27, 2017)

Docket No. EPA-HQ-OAR-2017-0091

To Whom It May Concern:

The Brazilian Sugarcane Industry Association ("UNICA") appreciates the opportunity to provide these comments on the proposed rule, entitled the "Renewable Fuel Standard Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019; Proposed Rule," 82 Fed. Reg. 34,206, published by the U.S. Environmental Protection Agency ("EPA") on July 21, 2017 ("Proposed Rule").

UNICA is the largest representative of Brazil's sugar, ethanol and bioelectricity producers. Its members were responsible for more than 50 percent of Brazil's ethanol production and 53 percent of Brazil's sugar production in 2016/2017 harvest season. UNICA serves as a source for credible scientific and economic data about the competitiveness of sugarcane biofuels. UNICA also works to encourage the continuous advancement of sustainability throughout the sugarcane industry and to promote ethanol as a clean, reliable alternative to fossil fuels.

Brazil is the world's largest sugarcane producer and the second largest producer and exporter of ethanol with 23 percent of global production and exports in 2016.¹ Despite these volumes, sugarcane ethanol production uses only four percent of Brazil's arable land² and reduces lifecycle greenhouse gas ("GHG") emissions by more than 100 percent³ compared to conventional gasoline. Brazil's innovative use of ethanol in transportation and biomass for power cogeneration has made sugarcane a leading source of renewable energy in Brazil, representing 17.5 percent of the country's total energy needs.⁴ Brazil replaced nearly one-third of its gasoline needs with sugarcane ethanol last year.⁵

¹ Percentages calculated by UNICA, based on LMC Ethanol Monthly Update (August 2017).

² Brazilian Institute of Geography and Statistics (PAM 2015, Censo Agropecuário 2006).

³ Environment Ministry. National Institute for Space Research. Model Ag-LUE-BR (Gerd Sparovek. Esalq/USP).

⁴ National Energy Balance – Base Year 2016 (2017).

⁵ *Id.*

UNICA is committed to assisting EPA in meeting the intent of Congress that the United States achieves energy security by implementing the Renewable Fuels Standards Program (“RFS2,” which replaced the predecessor program, “RFS1”). Reducing dependence on greenhouse gas (“GHG”) generating fossil fuels, especially fossil fuels obtained from unstable and even hostile regions, benefits the entire world, including the United States and Brazil. That is why UNICA has supported most of EPA’s past decisions implementing RFS2, and why its members have provided significant volumes of low-GHG-producing sugarcane ethanol to help obligated parties in the United States meet their RFS2 requirements.

However, in recent years UNICA has expressed concern that EPA’s proposals to set advanced biofuel volumes far below statutory targets are inconsistent with congressional intent. UNICA has commented that EPA’s greatly reduced advanced biofuels standards are a “self-fulfilling prophecy.”⁶ Signs that this prophecy is coming true are now beginning to appear, as EPA for the first time is proposing advanced biofuel and total renewable fuel volumes that are *lower than the volumes for the immediately prior year*.⁷ Although EPA acknowledges that Congress clearly intended the United States to aggressively *increase* its renewable fuel targets year after year as a technology-forcing measure—with all new increases beyond 2016 being achieved through new advanced biofuels⁸—EPA, for the first time, now proposes to send RFS2 backwards.⁹ EPA’s proposal to reduce 2018 advanced biofuel standards below 2017 levels and far below statutory targets is inconsistent with the intent of Congress in enacting the Energy Independence and Security Act of 2007 (“EISA”), is unsupported by the evidence, and will not address the real shortcomings in the renewable fuel industry. More specifically, EPA’s decision to set volumes of sugarcane ethanol at 100 million is a shadow of the 2 billion gallons of sugarcane ethanol EPA expected would be necessary to meet the advanced biofuel volumes mandated by Congress when EPA first revised the National Renewable Fuel Standard program to implement the requirements of EISA.¹⁰

UNICA recognizes the difficult position EPA faces regarding the RFS2 program, given the lower than expected volumes of cellulosic and other advanced biofuels in the last few years. These volumes are well below those set by statute. But Congress clearly intended to force growth of advanced biofuels, specifically contemplating that the United States would draw on sugarcane supplies to achieve the overriding goal of reducing the risks and costs of American dependence on petroleum.¹¹ EPA’s proposal to exercise cellulosic waiver authority to reduce advanced biofuel volumes by an amount equal to the projected shortfall for cellulosic biofuel undermines the intent of Congress and relies on flawed logic. In contrast to the Proposed Rule, EPA should encourage of biofuels with the same high GHG savings level as cellulosic biofuel, which would allow for carbon emissions reduction while giving the cellulosic sector additional

⁶ UNICA’s Comments on “Renewable Fuel Standard Program: Standards for 2017 and Biomass-Based Diesel Volume for 2018; Proposed Rule,” at 8 (July 11, 2016) (“UNICA 2016 Comments”).

⁷ Proposed Rule at 34,207.

⁸ *Id.* at 34,220.

⁹ *Id.* at 34,207.

¹⁰ *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule*, 75 Fed. Reg. 14,670, 14,790 (Mar. 26, 2010) (“Based on our current analysis of available pathways for producing advanced biofuels, we believe it will be necessary to include over 2 billion gallons of sugarcane ethanol in order to meet the advanced biofuel volumes by EISA.”).

¹¹ *The Hidden Cost of Oil: Hearing Before the S. Comm. on Foreign Relations*, 109th Cong. 6 (2006) (statement of Milton R. Copulos, President, Nat’l Defense Council Foundation) (“Hidden Cost of Oil Hearing”).

time to develop. Moreover, using the general waiver authority to reduce advanced biofuel volumes even further is inappropriate and inconsistent with a July 2017 decision of the United States Court of Appeals for the District of Columbia Circuit.¹² And EPA’s proposed calculation of likely attainable supply of sugarcane ethanol fails to adequately account for Brazil’s ability to respond to the market.

Given UNICA’s extensive experience with and knowledge of sugarcane ethanol production, its continuing partnership with EPA, and its interest in supporting successful implementation of the RFS2 program, UNICA respectfully requests that EPA carefully consider these comments as it evaluates the Proposed Rule.

I. Congress Sought To Achieve “Energy Independence and Security” in the United States by Replacing Petroleum With Renewable Fuels, Including Renewable Fuels from Other Countries

UNICA is encouraged that EPA is returning to the congressional intent of EISA, requesting comment on the role imported renewable fuels play in furthering the statute’s intent.¹³ UNICA is concerned, however, that EPA may misapprehend what Congress meant by “energy independence,” incorrectly equating “energy independence” with “domestic energy.”¹⁴

The unmistakable focus of EISA is on the risks of petroleum as an American fuel source. A Senate Foreign Relations Committee hearing that laid groundwork for the EISA bill was entitled “The Hidden Cost of Oil.”¹⁵ The Committee chair stated the purpose of the hearing was “to consider the externality costs of United States dependence on fossil fuels” to the American economy, national security, environment, and national goals.¹⁶ These costs stem from the instability of short-term oil supplies, price volatility, and concentration of oil resources in countries hostile to the United States or vulnerable to upheaval and terrorism.¹⁷ The Senate Foreign Relations Committee heard considerable testimony regarding the security threat presented by burning high GHG-emitting fossil fuels to produce energy.

To address the concern, Congress did not focus on increasing domestic energy production. Rather, Congress adopted a plan to reduce petroleum consumption by stimulating the domestic and foreign renewable fuel supply, converting the American economy to renewable fuel consumption, and reducing energy consumption overall through promoting energy efficiency. EISA’s very structure reflects this approach. Congress made the renewable fuel standard the first and most important subtitle of EISA, followed by biofuels research and development, and biofuels infrastructure.¹⁸ The Act’s remaining subtitles carry out

¹² *Americans for Clean Energy v. EPA*, No. 16-1005 (D.C. Cir. decided July 28, 2017).

¹³ Proposed Rule at 34,211-12.

¹⁴ Proposed Rule at 34,212 (“[D]ue to their origin outside the United States, imported renewable fuels may not have the same impact on energy independence as those produced domestically.”).

¹⁵ Hidden Cost of Oil Hearing, *supra* n.12.

¹⁶ *Id.* at 1.

¹⁷ *Id.*

¹⁸ Summary, Energy and Security Act of 2007, 7 CIS PL 110140 at 1 (Dec. 18, 2007).

congressional intent of reducing petroleum consumption by reducing energy demand primarily through efficiency.¹⁹

Congress considered but ultimately rejected relying solely upon an increase in domestically-produced and off-shore resources in EISA.²⁰ Committee testimony on the legislation established that reducing dependence on oil consumption was more important than reducing dependence on oil imports.²¹ The principal means by which Congress chose to address the threat imposed by dependence on oil consumption was to provide incentives for the production and use of renewable fuel inside and outside the United States. Congress specifically considered imported sugarcane ethanol as part of the response. Testimony before Congress urged sugar-produced alcohol from the Caribbean as part of the solution to America's petroleum problem.²² The testimony established that turning sugar into alcohol "would enhance our supplies" without harming American domestic producers and noted sugarcane was not a scarce resource.²³ As one witness explained "there's plenty [of sugarcane] to go around. It's not going to compete with domestic producers. We can use everything they have, and more."²⁴

The RFS created by Congress allows obligated parties to satisfy their obligations either by producing *or importing* renewable fuels, including advanced biofuels.²⁵ In fact, as EPA observes, Congress was especially focused on driving the development of advanced biofuels, including imports, because of the much lower externality cost arising from their low life-cycle GHG emissions. This focus is reflected in the fact that, as EPA notes, EISA expressly requires all new growth in renewable fuels beyond 2016 be achieved through aggressive new growth in advanced biofuels. As the United States House of Representatives noted, EISA "requires the production and use of at least 36 billion gallons of renewable fuel in this country by 2022, capping corn ethanol at 15 billion gallons."²⁶ Corn ethanol is the most abundant and ready source of domestically produced renewable fuel. Had Congress intended that domestic fuel production be the chief strategy for accomplishing American energy independence and security, it would not have limited corn ethanol production and required 26 billion gallons of advanced biofuel production. It also would have provided that obligated parties could only meet their RFS

¹⁹ *Id.* at 1-3.

²⁰ Hidden Cost of Oil Hearing at 6 (statement of Milton R. Copulos).

²¹ *Id.* at 14 (statement of Dr. Hillard Huntington, Executive Director, Energy Modeling Forum, Standord University). Summary of House Amendments to the Senate Amendments to H.R. 6, at 4.

²² *Id.* at 6 (statement of Milton R. Copulos).

²³ *Id.*

²⁴ *Id.*

²⁵ 42 U.S.C. §§ 7545 (o)(2)(A)(i) ("the Administrator shall revise the regulations under this paragraph to ensure that transportation fuel sold or *introduced into commerce in the United States* (except in noncontiguous States or territories), on an annual average basis, contains at least the applicable volume of renewable fuel, advanced biofuel, cellulosic biofuel, and biomass-based diesel, determined in accordance with subparagraph (B)") (emphasis added), 7545(o)(2)(a)(iii)(I) ("the regulations promulgated under clause (i) – shall apply to refineries, blenders, distributors, and *importers*") (emphasis added), 7545(o)(5)(A)(i) ("The regulations promulgated under paragraph (2)(A) shall provide – (i) for the generation of an appropriate amount of credits by any person the refines, blends, or *imports* gasoline that contains a quantity of renewable fuel that is greater than the quantity under paragraph (2)") (emphasis added).

²⁶ Proposed Rule at 34,220 ("In previous years when exercising the cellulosic waiver authority to determine the required volume of advanced biofuel, we have taken into account the availability of advanced biofuels, their energy security and GHG benefits, and the apparent intent of Congress as reflected in the statutory volumes tables to substantially increase the use of advanced biofuels over time...").

obligations through production of domestic biofuels. Yet, EISA expressly allows obligated parties to produce *or import* renewable fuels.

We urge EPA to follow Congressional intent and do not take any action that would discourage or stop the imports of advanced fuels into the United States.

II. Advanced Biofuels Standards Should Be Set So As to Make Up for Cellulosic Shortfalls and Avoid a Retreat from Congressional Intent

Congress set the advanced biofuels target for 2018 at 11 billion gallons.²⁷ Yet, EPA proposes to establish the standard for advanced biofuels in 2018 at just 4.24 billion gallons, a volume that falls 6.762 billion gallons short of this statutory target.²⁸ Aside from being an order of magnitude below the target Congress established, the 4.24 billion gallon figure is 40 million gallons less than EPA's advanced biofuel requirement for 2017.²⁹ EPA's proposed maximum amount by which EPA may reduce advanced biofuel volumes under the so-called "cellulosic waiver authority" established in Clean Air Act Section 211(o)(7)(D)(i). But the Clean Air Act does not require EPA to waive the advanced biofuel statutory volume up to the amount by which the applicable volume of cellulosic biofuel is reduced. EPA proposes to exercise its discretion to reduce advanced biofuel volumes to the maximum extent allowed after considering factors such as availability of advanced biofuels, greenhouse gas and security benefits of advanced biofuels, and costs.

Noticeably absent from EPA's proposed list of factors to exercising a maximum waiver is congressional intent. EPA correctly notes that the Clean Air Act, which incorporates EISA, does not specify conditions, criteria, or factors EPA should consider when deciding to what extent it should exercise the authority to reduce advanced biofuel volumes based on projected shortfalls in cellulosic fuels. But congressional intent provides EPA clear guidance regarding how the Agency should exercise its authority. And Congress intended EISA address American vulnerabilities stemming from petroleum consumption by reducing petroleum consumption through aggressive stimulation of low lifecycle GHG-emitting biofuels. Congress created the special carve-out for cellulosic biofuel as a subcategory of advanced biofuel because cellulosic biofuel has the lowest security and other externality costs, given its very low life cycle GHG emissions.

When deciding how to exercise its discretion, EPA should aim to achieve Congress' intent. Here, EPA should make up for the cellulosic shortfall with sugarcane ethanol, the commercially available biofuel with the most comparable GHG emissions savings and the greatest potential for quick production. EPA's own lifecycle analysis shows that sugarcane ethanol from Brazil is an advanced fuel that reduces greenhouse gases by at least 61 percent when compared to gasoline, a reduction that surpasses the threshold of cellulosic fuels.³⁰ This is significant because EPA's regulations require that cellulosic fuel have a GHG emission savings

²⁷ 42 U.S.C. § 7545(o)(2)(B)(i)(II).

²⁸ Proposed Rule at 34,221.

²⁹ *Id.*

³⁰ *Id.* at 34,220.

of at least 60 percent when compared to gasoline.³¹ In the future, EPA could institute a regulation allowing compliance entities to use advanced fuels with a GHG emission savings superior to 60 percent, such as sugarcane ethanol, to meet the cellulosic shortfall. This would provide an incentive to mills to increase production and to export higher volumes of sugarcane ethanol to the United States without increasing GHG lifecycle emissions. Furthermore, cellulosic ethanol would still be favored, because sugarcane ethanol would simply help make up the difference in the cellulosic shortfall and the United States would not need to forego the GHG reductions otherwise lost in volume decreases of all categories of fuel.

Alternatively, EPA could create a separate carve-out in advanced fuels for advanced ethanol with low GHG lifecycles, requiring that a specified volume of the product be blended into the gasoline supply. As set forth in UNICA's 2015 Comments, EPA could also change the equivalence value ("EV") for sugarcane ethanol to reflect its relatively low GHG lifecycle, allowing compliance entities to meet their goal through increased use of the fuel. EPA has already taken this approach with biodiesel. In addition to having a D4 RIN value, EPA has assigned biodiesel a 1.5 EV to reflect its greater energy density than other renewable fuels. A similar higher than 1.0 EV could be assigned to sugarcane ethanol to quantify its superior GHG emissions performance. The greater EV value would provide an incentive to obligated parties to purchase sugarcane ethanol, which would assist in making up for the shortfall in cellulosic biofuel with a comparably low-emission fuel.

UNICA has other concerns with EPA's proposed reduction of biofuels. Specifically, UNICA questions the soundness of EPA's propose to set a "reasonably attainable" volume for advanced biofuel, which it defines as either the volume not likely lead to either the diversion of advanced biofuel feedstocks from existing uses to biofuel production or the diversion of advanced biofuels from foreign markets to the United States, with no net benefit in GHG reduction. EPA fails to provide any reasonable support for its assumption that setting advanced biofuel standards at reasonably attainable volumes would actually result in a diversion of foreign advanced biofuels from other markets to the United States. Nor does EPA attempt to determine whether and to what extent any such diversion would be compensated for by increased foreign production of advanced biofuels, leading to an overall net benefit from GHG emissions reduction.

Even if such diversion would occur and there would be no net GHG benefit, EPA has not demonstrated that the diversion would be inconsistent with congressional intent to improve American energy security by increasing production *and use* of renewable energy. The CAA makes production and importation functionally and qualitatively equivalent by allowing responsible entities to meet their obligations by either producing or importing advanced biofuels. Congress did prohibit responsible entities from importing the fuel if doing so diverted that fuel from another market to the United States.

³¹ *Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule*, 75 Fed. Reg. 14,670, 14,790 (Mar. 26, 2010) (per EPA's 2010 RFS2 rulemaking, sugarcane ethanol achieves a 61% reduction in GHG emissions compared to the gasoline baseline). UNICA has data indicating the number is even higher. See SUGARCANE ETHANOL: CONTRIBUTIONS TO CLIMATE CHANGE MITIGATION AND THE ENVIRONMENT 17 (Peter Zuubier & Jos Van de Vooren eds. 2008).

Most significantly, as UNICA has asserted in comments on past rulemakings, EPA's approach of reducing statutory advanced biofuels in response to poor performance by cellulosic biofuels has had the effect of creating a vicious cycle. Advanced biofuel producers such as Brazilian sugarcane ethanol producers are capable of dramatically increasing supply in response to reasonable assurance of demand. EPA's history of setting advanced biofuel volumes below statutory levels informs the market that supply for foreign-based advanced biofuels will be weak. EPA's proposal to shrink the amount of advanced biofuels that the United States produces and imports from 2017 levels is the most dramatic signal yet that producers should not increase the fuel supply. Rather than setting aggressive advanced biofuel standards, as Congress intended, EPA is moving in the opposite direction. By doing so, EPA is sending a signal to American and international investors that the United States renewable fuel industry will not grow.

III. EPA Should Set Import Volumes for Sugarcane Ethanol at Levels That Will Provide Producers Sufficient Incentive to Realize the Potential of Sugarcane Ethanol Production

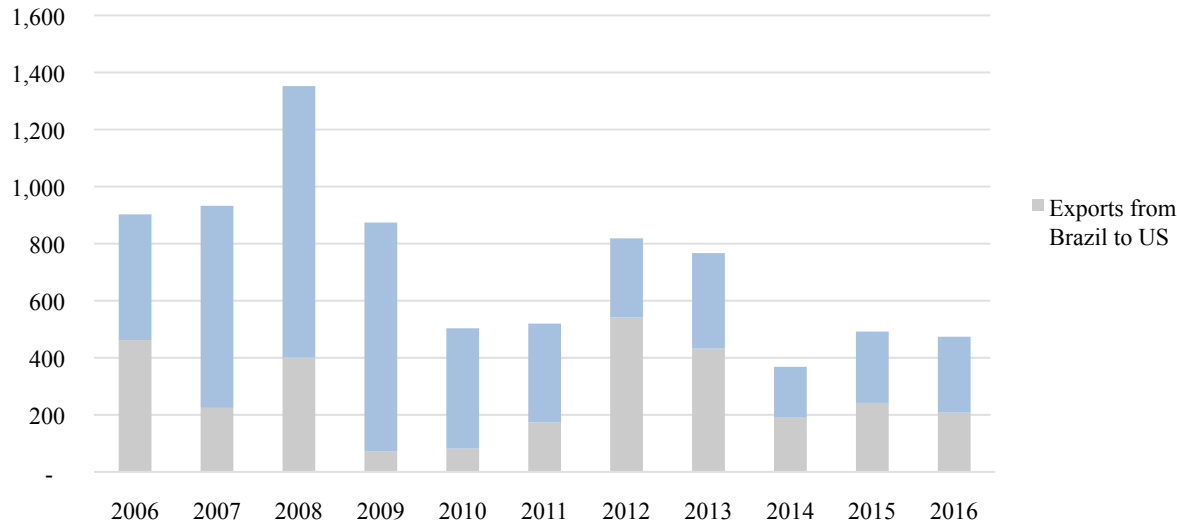
EPA proposes to cut import volumes for sugarcane ethanol in half based on 2017 volumes at 100 million gallons.³² EPA justifies this proposal based on data from 2016 indicating that Brazil only exported 34 million gallons of sugarcane ethanol to the United States. UNICA understands EPA may be reluctant to set higher volumes based on this low import volume data. However, a closer look at the data reveals that the 34 million gallon import number masks the true amount of Brazilian sugarcane ethanol imported into the United States. Moreover, EPA must understand that past rulemakings have suppressed Brazilian sugarcane imports, a dynamic that EPA could reverse in rulemaking that aims to close rather than widen the gap between advanced biofuel supply and EISA targets. Finally, EPA's concerns that Brazil's sugarcane ethanol exports may actually fall below the 100 million mark is based on a flawed understanding of the dynamics of Brazilian ethanol production.

The 34 million gallon figure EPA cites is the amount of Brazilian sugarcane ethanol imported into the United States in 2016 that generated RINs. The United States imported 207 million gallons of sugarcane ethanol from Brazil in total in 2016. The approximately 170 million gallons of sugarcane ethanol exported to the United States from Brazil in 2016 that did not generate RINs were likely the result of long-term contracts obligating Brazilian producers to supply ethyl-terb-butyl ether ("EBTE").³³

³² Proposed Rule at 34,223.

³³ In our July 2015 Comments, UNICA supplied Brazilian export volumes and charts which contained volumes different from EPA whose source is EIA figures; some were higher and some lower. It appears that difference was caused by the fact that UNICA's volumes, based on data from the Ministry of Foreign Trade of Brazil ("SECEX"); <http://www.aliceweb.mdic.gov.br/>, included both ethanol for fuel and ethanol exported for use as ethyl tert-butyl ether ("ETBE"). ETBE is used for industrial purposes in gasoline refining. Hence, for purposes of these comments, we will refer to EIA numbers where they exist. It is worth noting that ETBE is generally supplied to the U.S. in significant quantities based on long-term contracts. Exports to U.S. were predominantly non-fuel grades in the last two years. About 60% of the 2015 ethanol exports to the United States was for non-fuel use (e.g. ETBE), based on a cross-checking analysis between SECEX and EIA data, and also on those published by LMC International, which maps the U.S. ethanol imports by origin and also by type in its Quarterly ethanol report. See Figure 3. Were EPA to incentivize the use of sugarcane ethanol over a similarly certain and extended period, Brazil

Brazilian ethanol exports, highlighting the volume exported to US (million gallons)



Source: SECEX

Brazil’s capacity to supply sugarcane ethanol for the United States fuel greatly exceeds the 34 million gallon figure. Statistics from the Ministry of Foreign Affairs of Brazil (SECEX) show that Brazil exported 474 million gallons to the world in 2016. In 2008, Brazil’s total exports hit a record 1.35 billion gallons of sugarcane ethanol, reaching 164 in a single month. EIA data indicates Brazil exported 681 million gallons to the United States alone in 2006, 427 million gallons in 2007, and 523 million gallons in 2008. Brazil exported 486 million gallons to the United States in 2012 and 372 million gallons in 2013, also according to the EIA.³⁴ This recent past history demonstrates Brazil’s ability to dramatically increase ethanol supply where there is adequate demand.

When the market for sugarcane ethanol spikes Brazil’s producers are able to respond with barely a year’s lag-time. The spike in 2006 imports was a result of the United States banning the fuel additive methyl tertiary butyl ether (“MTBE”) from gasoline, which increased demand for ethanol as a blend.³⁵ In 2008, there were severe floods in the Midwest that reduced domestic corn ethanol production.³⁶ In 2012, there was a corn shortfall and a high price paid to RINs from sugarcane ethanol. Brazil was able produce sufficient ethanol on short notice to make up for issues in American corn ethanol production. In 2011, Brazil’s total exports were 519 million gallons and in 2012 the volume increased to 818 million gallons – a growth of 58 percent in just one year.³⁷ This increase in Brazilian sugarcane ethanol exports coincided with an increase in

could export additional amounts of sugarcane ethanol as well. The export of ETBE would not affect the export availability of sugarcane ethanol if there were demand for the latter. UNICA 2016 Comments, 8 n.16.

³⁴ See Figures 2 & 3, UNICA 2016 Comments, 8-9.

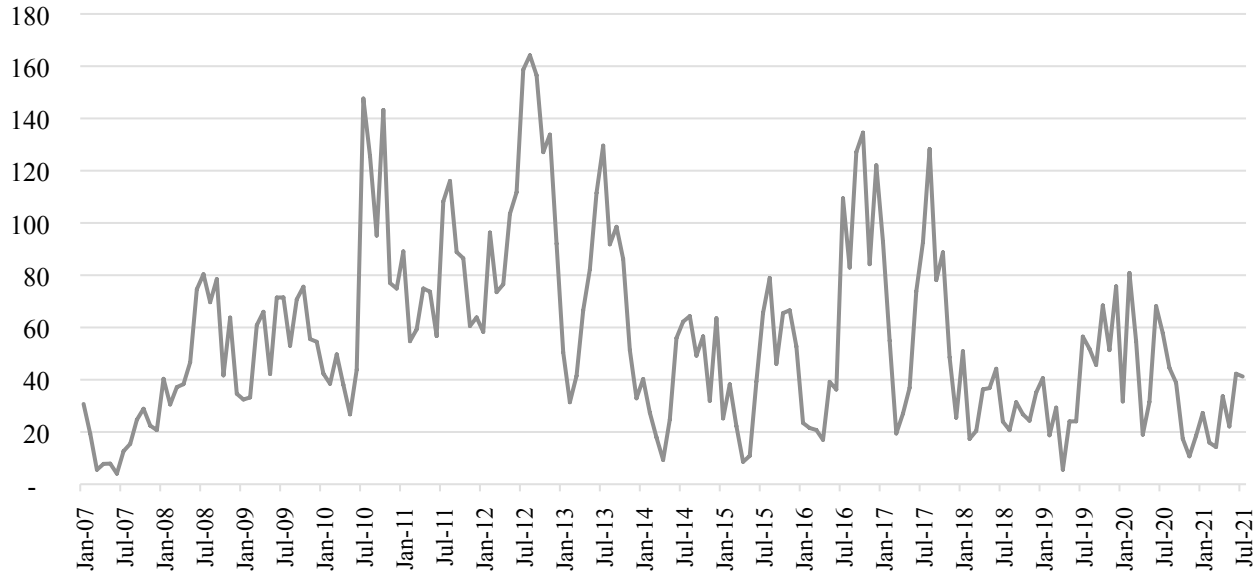
³⁵ See <https://archive.epa.gov/mtbe/web/html/faq.html> (2013 status update).

³⁶ See, e.g., http://www.nbcnews.com/id/25144871/ns/business-stocks_and_economy/t/midwest-flooding-adds-farmers-woes/#.V360KvkrLmE; <http://www.reuters.com/article/us-usa-flooding-gasoline-idUSN1829856720080619>.

³⁷ See UNICA 2016 Comments, at 11, Figure 4.

Brazil's gasoline imports, which indicates that Brazilian sugarcane exports are not tied to domestic demand for gasoline.

Brazilian Ethanol Monthly Exports (Thousands of Gallons)



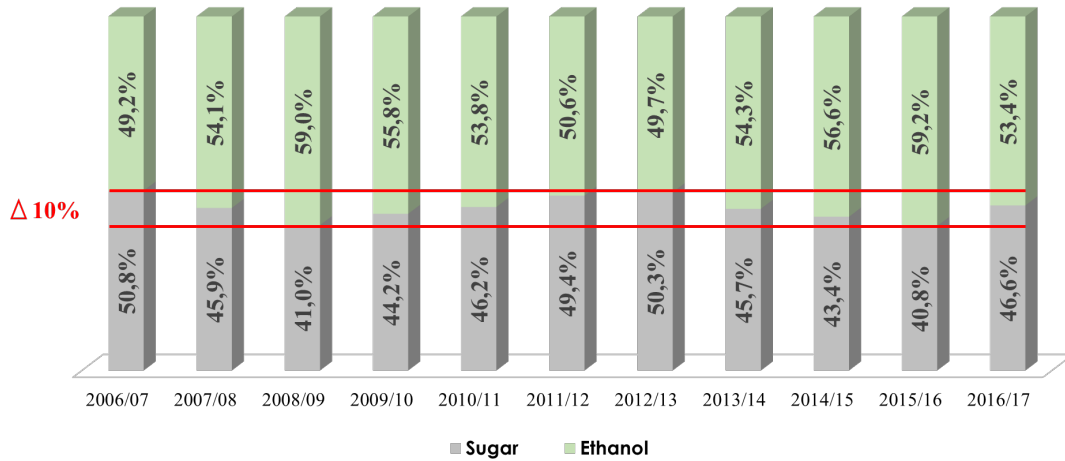
Source: SECEX

Contrary to EPA's assumption, the world price of sugar is in decline, remaining supported around 14 cents/lb during most of July. Due to this lower price level, it is possible that the industry alters its product mix stimulating ethanol production. Several factors justify this argument.

Firstly, a large volume of the national sugar production is in part to fulfill ongoing contracts that Brazilian millers took over when prices were at higher levels. Hence, they have started the season with a high sugar mix. Nevertheless, as they still have to price their remaining output even despite this bearish scenario, the millers should probably favor ethanol over the remainder of 2017.

Secondly, the variable sugar vs. ethanol split is limited up to a 10% technical variation. This particular limitation is a direct consequence of factors like weather conditions, sugarcane quality and final crop size. Therefore, the influence of the international sugar price in Brazilian ethanol supply is limited and vice-versa.

Sugar and ethanol mix in Brazil

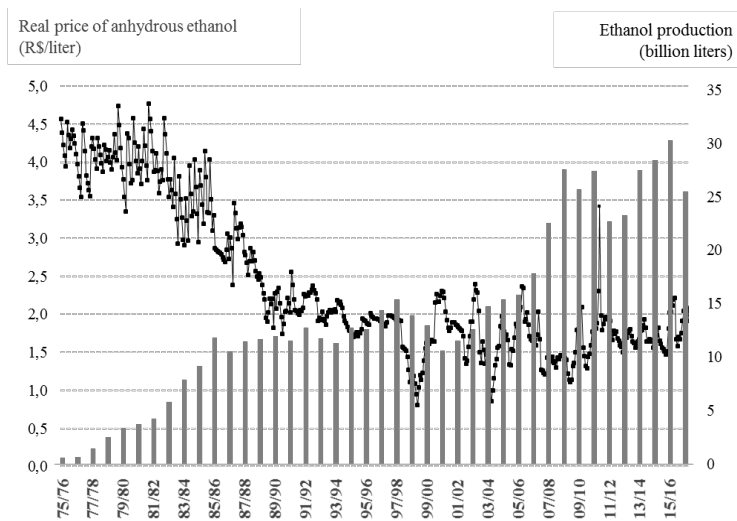


Source: UNICA and Ministry of Agriculture, Livestock, and Supply

Finally, on the demand perspective, sugar is faced with many commercial barriers worldwide - notably the safeguard measures imposed by China in May this year.

Whatever the final product mix, Brazilian sugarcane sector have been investing in order to boost its competitiveness - both on sugar and on ethanol. For example, the industry invested in renewing their cane fields, with a 37% increase from January thru June 2017 when compared to the same period in 2016. Newer cane can translate in more sugar content in the plant, which will help to improve productivity. Indeed, the sector has technological potential to increase its agricultural productivity and industrial efficiency, as it has already been observed in the past. Since 1975, ethanol production was multiplied by 20, while its real price reduced by half.

Price and production of anhydrous ethanol in Brazil, per harvest season - 1975/1976 to 2016/2017. Values in R\$ per liter (real price) and billion liters (production).



Source: UNICA, Ministry of Agriculture, Livestock and Supply. Note: INPC (National Consumer Price Index published by IBGE - Brazilian Institute of Geography and Statistics) used to adjust current price in terms of real price.

Therefore, if EPA sends a strong demand signal for Brazilian sugarcane ethanol in the final rule, mill owners will have time and incentive to invest in more cane field renovation which can lead to more ethanol in the following harvest available for exports to the US market.

The fuel flexibility of Brazil's vehicular fleet also frees Brazilian capacity to provide the United States with sugarcane ethanol. Although Brazil has fully integrated sugarcane ethanol into its transportation fuel mix by replacing one third of its gasoline needs with ethanol,³⁸ it has done so without significant impact to its ability to export high volumes of sugarcane ethanol. Indeed, Brazil recently raised the blend of ethanol in its gasoline from 25 percent to 27 percent without a significant impact on compliance or on volumes available for export. Brazil can offer a powerful example of how government policies and the market interact to promote advanced biofuels and the infrastructure to use them. UNICA is not suggesting that EPA adopt the Brazilian renewable fuels program, but Brazil has shown the potential to expand, rather than limit, the use of renewable fuels.

The alleged "E10 blend wall" does not justify EPA's proposal to drastically reduce the statutory volumes of advanced biofuels and total renewable fuels. The blend wall is a factor asserted by refiners and other critics of the RFS2 program, who argue that the transportation fuel market cannot absorb more than 10 percent blend of ethanol in the America's fuel supply, in part because of a lack of infrastructure to deliver higher blends to consumers as well as the limitations of older vehicles and their warranties. UNICA has commented that this claim amounts to setting standards based on "demand," whereas Congress requires EPA to set standards based on supply.³⁹ On July 28, 2017, the United States Court of Appeals for the District of Columbia Circuit agreed, rejecting EPA's attempt to justify setting lower quotas for ethanol based on constraints in demand such as limited infrastructure to deliver product to consumers or the availability of higher blended fuel mixes.⁴⁰

The most significant factor affecting Brazilian sugarcane ethanol exports to the United States is economics. In the past recent years, Brazilian sugarcane ethanol is imported into the United States mainly when the D5/D6 RIN spread is wide enough to cause positive arbitrage. Sugarcane ethanol has a RIN value of D5 and can be used to meet both advanced fuel and total renewable fuel compliance requirements. Conventional ethanol has a RIN value of D6 and can only be used to satisfy total renewable fuel requirements. A higher advanced biofuel standard leads to a larger D5/D6 price differential, which general contributes to increased sugarcane ethanol imports. However, instead of meeting their advanced biofuel requirements by importing sugarcane ethanol, obligated parties are importing biodiesel because it is economically more advantageous. Biodiesel not only has a RIN value of D4, it has an EV of 1.5 to 1, because of its energy density, which means an obligated party can buy less to satisfy its obligations. On top of that, up until December 2016 biodiesel blenders would receive a \$1.00 US / gallon for biodiesel blended to regular diesel and generate a D4 RIN. Although this credit has expired, industry is

³⁸ UNICA, "The Brazilian Experience," available at <http://sugarcane.org/the-brazilian-experience>.

³⁹ UNICA's Comments on "Renewable Fuel Standard Program: Standards for 2014, 2015 and 2016 and Biomass-Based Diesel Volume for 2017; Proposed Rule", at 18 n.45 (2016) ("EPA asserts that it can consider all the factors specified in section 211(o)(2)(B)(iii), 40 U.S.C. § 7545(o)(2)(B)(iii), in implementing the cellulosic waiver authority. Notably, none of those factors include constraints on demand, such as the 'E10 blendwall.'").

⁴⁰ *Americans for Clean Energy v. EPA*, Case No. 16-1005 (D.C. Cir. July 28, 2017).

working to have it reinstated, and if that happens, the economic advantage of meeting advanced biofuel volumes with D4 rather than D5 RINs will continue. Unless EPA takes action that will create a real demand for sugarcane ethanol to be blended to gasoline, imports of Brazilian ethanol will only happen when positive arbitrage is achieved. Lately we have seen positive arbitrage mainly for imports into California, given sugarcane ethanol's role in the Low Carbon Fuel Standard (LCFS).

As UNICA have commented in past rulemakings, Brazilian sugarcane ethanol is an important fuel to help California comply with the goals of its LCFS program. The California Air Resources Board (CARB) has stated that sugarcane ethanol would likely play a "key compliance role" in the LCFS.⁴¹ Brazilian ethanol is among the lowest carbon intensive fuels commercially available to be blended with gasoline in California, so we expect that California will continue to be an important driver for Brazilian sugarcane ethanol volumes. Because compliance with the LCFS will also count for compliance with the relevant RFS2 category, every gallon of sugarcane ethanol imported into California for blending into transportation fuel will count toward the advanced biofuel and total renewable fuel requirements under RFS2.

Were EPA to set higher sugarcane ethanol import levels, these resources will not be diverted, because Brazilian sugarcane ethanol supply is elastic and capable of responding to increased demand. If the EPA sends a signal that the United States needs increasing volumes of advanced biofuels on an ongoing basis, Brazil will be able to respond the following year. Sugarcane harvest goes from April through November/ December each year, which means a final rule issued in November that increases the sugarcane ethanol standard will allow growers to plan accordingly, resulting in greater sugarcane ethanol production to meet American demand.

UNICA agrees that EPA may not to use general waiver authority to reduce advanced biofuel volumes even further below statutory targets.⁴² Whereas the cellulosic waiver provision contained no specific criteria beyond its limits tied to cellulosic biofuel reduction, the general waiver provision contains very specific criteria. Clean Air Act Section 211(o)(7)(A) allows EPA to reduce statutory volume requirements for renewable fuels in only two circumstances: (1) if EPA determines "that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States"; and (2) if EPA determines "that there is an inadequate domestic supply of renewable fuel." There is no evidence of either risk of severe harm or inadequate domestic supply of renewable fuel. Therefore, EPA correctly concludes it may not use its general waiver authority to reduce advanced biofuel levels below even that proposed based on cellulosic waiver authority. Arguments or evidence that there is inadequate *demand* for ethanol do not entitle EPA to exercise general waiver authority to reduce advanced biofuel levels. And as discussed above, the United States Court of Appeals for the District of Columbia recently held that EPA abused its general waiver authority by including factors such as

⁴¹ CARB, Air Resources Board, Low Carbon Fuel Standard 2011 Program Review Report, Final Draft, at 170 (Dec. 8, 2011), available at http://www.arb.ca.gov/fuels/lcfs/workgroups/advisorypanel/20111208_LCFS%20program%20review%20report_final.pdf

⁴² Proposed Rule at 34,213.

demand and infrastructure. The general waiver authority, the court held, is intended to be based solely on available supply.⁴³

Finally, although UNICA acknowledges that EPA has not requested comment on the question of the statutory reset, UNICA reminds EPA of its past comments regarding the potential detrimental effects of EPA setting lower than necessary advanced biofuels requirements. UNICA has stated that the EPA track record of setting low advanced biofuels below 20 percent of the statutory target could meet the conditions for a statutory reset under Clean Air Act Section 211(o)(7)(F).⁴⁴ UNICA has expressed concern that, although EPA has been silent regarding the reset in past rulemakings, the mere act of setting volume requirements in such a way as to technically trigger reset creates further uncertainty and discourages the production advanced biofuels. EPA has sown even greater market uncertainty in this rulemaking by invoking the reset but placing comments on the issue beyond the scope of the rulemaking.

UNICA acknowledges that discussion of reset is a subject for another rulemaking. However, UNICA urges EPA to include some statement regarding the reset that will stabilize market expectations in favor of the statutory goal of increasing renewable fuel use in the United States. UNICA also encourages EPA, should it contemplate a reset rulemaking, to bear in mind congressional intent of providing incentives for advanced biofuels beyond 2016.

UNICA appreciates the opportunity to submit these comments and hopes to continuing to work with EPA to fully achieve the economically and environmentally beneficial goals Congress set in promulgating the RFS2 program. UNICA is ready to provide further information or answer any questions EPA may have about the substance of these comments or the Brazilian sugarcane ethanol industry.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "E. Farina", with a long horizontal flourish extending to the right.

Elizabeth Farina President & CEO

A handwritten signature in black ink, appearing to read "Leticia Phillips", with a stylized, cursive font.

Leticia Phillips
Representative – North America

⁴³ *Supra*, n.46.

⁴⁴ UNICA 2016 Comments, at 25.