



BRAZILIAN SUGARCANE INDUSTRY ASSOCIATION

ETHANOL • SUGAR • ELECTRICITY

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July 11th, 2016.

RE: UNICA's Comments on "Renewable Fuel Standard Program: Standards for 2017 and Biomass-Based Diesel Volume for 2018; Proposed Rule," 81 Fed. Reg. 34,788 (May 31, 2016)

Docket No. EPA-HQ-OAR-2016-0004

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 2017 and Biomass-Based Diesel Volume for 2018; Proposed Rule," 81 Fed. Reg. 34,788, published by the U.S. Environmental Protection Agency ("EPA") on May 31, 2016 ("Proposed Rule").

UNICA is the largest representative of Brazil's sugar, ethanol and bioelectricity producers. Its members were responsible for more than 40 percent of Brazil's ethanol production and 55 percent of Brazil's sugar production in 2015/2016 harvest season. UNICA's priorities include serving 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 26 percent of global production and 23 percent of world exports in 2015.¹ Despite these volumes, sugarcane ethanol production uses only 2 percent of Brazil's arable land² and reduces lifecycle greenhouse gas ("GHG") emissions by more than 100 percent³

¹ Percentages calculated by UNICA, based on LMC Report Data - Second Quarter 2016.

² Brazilian Institute of Geography and Statistics (PAM 2010, Censo Agropecuário 2006). Environment Ministry. National Institute for Space Research. Model Ag-LUE-BR (Gerd Sparovek. Esalq/USP).

compared to conventional gasoline. Also, thanks to our innovative use of ethanol in transportation and biomass for power cogeneration, sugarcane is now a leading source of renewable energy in Brazil, representing 15.7 percent of the country's total energy needs⁴. More than 40 percent of the country's gasoline needs have been replaced by sugarcane ethanol last year.⁵ The industry also continues to expand existing production of other renewables products and, with the help of innovative companies here in the United States and elsewhere, is already offering bio-based hydrocarbons that can replace carbon-intensive fossil fuels and chemicals.

In the past, UNICA has supported EPA's decisions implementing the Renewable Fuels Standards Program ("RFS2," which replaced its predecessor, "RFS1"), and its members have provided significant volumes of sugarcane ethanol, an extremely low carbon advanced biofuel, to help obligated parties in the United States meet their RFS2 requirements. Hence, UNICA and its members play an important role in the ongoing success of the RFS2 program. UNICA recognizes the continued difficult position EPA finds itself with regard to the RFS2 program, given the lower than expected volumes of cellulosic and other advanced biofuels in the last few years, well below statutorily set volumes. However, UNICA has concerns with EPA's proposed significant reduction of the 2017 statutory volume requirements for advanced biofuels (and by extension total renewable fuels), just as it expressed concerns with the unnecessarily low volumes EPA set for 2015 and 2016 in the preceding RFS2 rule.

UNICA's concerns are based on several issues. First, lowering the statutory volume for advanced biofuel by EPA's proposed amount is not supported by the statute nor necessary since Brazil has the capacity to export higher volumes of advanced ethanol, under the right market conditions, which EPA helps set. Second, in assuming Brazil could export no more than 200 million gallons of sugarcane ethanol, EPA has significantly and unjustifiably understated the ability of Brazilian exports to assist in implementation of the program, opining on economic factors in Brazil that EPA incorrectly asserts would limit exports to the United States. Further, EPA's proposed reductions do not support Congressional intent and jeopardize progress toward increased use of fuels with low lifecycle GHG emissions as well as the United States' ability to meet its international GHG emission reduction commitments.

Should EPA nevertheless determine a need to lower the statutory volumes for advanced biofuels in the final rule, it should do so only to the absolute minimum so as to avoid further statutory reset and market uncertainty. Indeed, increasing the proposed volume would send a stronger market signal that could stimulate additional sugarcane ethanol imports into the US. To this end, UNICA supports efforts to increase the annual volume for advanced biofuels from 2016

³ Seabra, J. E. A., Macedo, I. C., Chum, H. L., Faroni, C. E. and Sarto, C. A. (2011). Life cycle assessment of Brazilian sugarcane products: GHG emissions and energy use. *Biofuels, Bioprod. Bioref.*, 5: 519–532. doi:10.1002/bbb.289

⁴ National Energy Balance (2015), published by Energy Research Company (EPE) - government agency linked to Brazilian Ministry of Mines and Energy.

⁵ National Agency of Petroleum, Natural Gas and Biofuels (ANP).

levels and believes they should not be lowered as far as EPA proposes, and certainly no further. EPA should avoid reducing volume requirements for advanced biofuels below 20 percent in 2017 and certainly not below 50 percent as such reductions may have implications on statutory provisions on which EPA has yet to elaborate. Finally, EPA should consider ways it could further incentivize the production of advanced biofuels, which do not enjoy the same incentives as other advanced fuels like biodiesel, yet achieve lifecycle GHG reductions equivalent to or greater than other biofuels.

These comments, which build on UNICA's prior comments on the RFS2 program, and in particular, comments filed in July 2015 with regard to EPA's initial proposal to reduce 2015 and 2016 volumes,⁶ are intended to provide updated information regarding Brazilian sugarcane ethanol production and export capacity and to express UNICA's continued concerns with EPA's proposed reductions in statutorily-specified volume requirements for advanced biofuels. Specifically, these comments will:

1. Briefly describe the important role the Brazilian sugarcane industry has played and can continue to play with regard to the successful implementation of the RFS2 program;
2. Demonstrate that Brazil has significant capacity to help the United States achieve higher volumes of advanced biofuel, including by providing updated information on recent U.S. imports and on sugarcane ethanol production and export availability for 2016 and 2017;
3. Explain why EPA's estimate of the potential for import of 200 million gallons of sugarcane ethanol is unnecessarily low and why the Agency's rationale for this estimate rests upon incorrect assumptions and misunderstandings of the sugar, ethanol and gasoline markets in Brazil;
4. Explain why reducing statutory volume requirements for advanced biofuels through waiver provisions in the amounts EPA proposes is not necessary;
5. Explain why EPA's proposed reductions are inconsistent with the RFS2 program and Congressional intent, and do not support the President's Climate Change Action Plan and international commitments;
6. Explain why, if EPA decides to lower the advanced biofuel volume, it should do so only minimally, in such a way as to avoid setting up future uncertainty regarding statutory re-set in 2017; and

⁶ UNICA's Comments on "Renewable Fuel Standard Program: Standards for 2014, 2015 and 2016 and Biomass-Based Diesel Volume for 2017; Proposed Rule," 80 Fed. Reg. 33,100 (July 29, 2015) ("July 2015 Comments"); *see also* UNICA, Submission of Comments: Proposed 2014 Standards for Renewable Fuel Standard Program, 78 Fed. Reg. 71,732 (Nov. 29, 2013), Docket No. EPA-HQ-OAR-2013-0479 (Jan. 28, 2014).

7. If it does undertake a rule resetting volumes, EPA should consider other ways of meeting RFS2 goals by providing incentives for greater use of sugarcane ethanol.

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

I. The Brazilian sugarcane industry is an important and active partner in EPA's implementation of the RFS2 program.

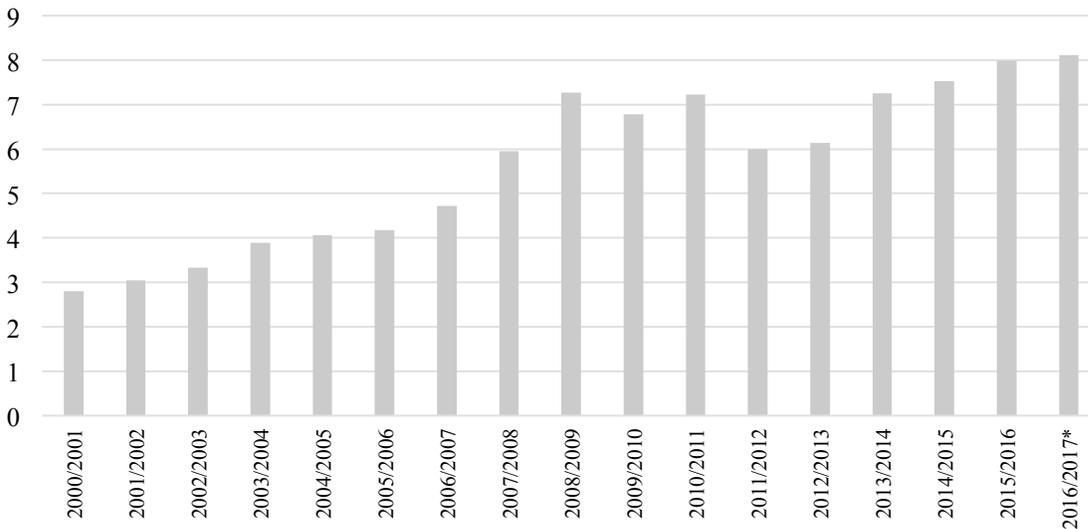
1. Sugarcane ethanol production remains high and is key to implementation of the RFS2 program.

The Energy Independence and Security Act of 2007 ("EISA") directs EPA to implement the RFS2 program, which is now codified in the Clean Air Act ("CAA"). Ever since Congress passed the EISA, UNICA has represented Brazil's sugarcane biofuel industry in matters regarding the RFS2 program. Brazilian sugarcane producers have made a long-term commitment to providing clean, renewable advanced biofuels to meet energy and environmental goals in Brazil and the United States, and in many other countries. As a result of Brazil's long-term commitment to sugarcane ethanol, Brazilian sugarcane ethanol producers have been able to supply the majority of the United States' undifferentiated advanced biofuels in each year since EPA began implementing the RFS2 program. In fact, in the past four years, nearly 1.2 billion gallons of sugarcane biofuel imported from Brazil flowed into American vehicles. During this time, sugarcane ethanol has comprised only 2 percent of all renewable fuels consumed by Americans, but has provided 10 percent of the U.S. advanced biofuel supply.⁷

Over the last several years, there have been heavy investments in increasing production and improving export logistics to satisfy growing demand triggered, in part, by the RFS2. The Brazilian sugarcane sector has gone through significant transformation since Congress enacted the RFS2, and it is now a sector composed of major multinational groups with great investment capacity to increase production and exports where market incentives exist. Brazil's sugarcane ethanol producers are investing over \$3.5 billion up to 2017 in new ethanol pipelines, inland waterways and port facilities. As a result, there has been a continued rise in sugarcane ethanol production over the past five years, aimed at meeting mainly domestic but also foreign demand, including U.S. demands for renewable fuels. Preliminary estimates for 2016/2017 show some 8.1 billion gallons produced in Brazil, slightly above 2015/2016 figures, and likely to grow further (*see* Figure 1 below). As will be explained below, significant portions of this amount are available for export into the United States under the right market conditions.

⁷ UNICA, RFS Fact Sheet, available at <http://sugarcane.org/resource-library/books/UNICA-RFS-2016-Fact-Sheet.pdf>

Figure 1. Brazilian ethanol production per crop year (billion gallons)



Source: UNICA and Ministry of Agriculture, Livestock and Supply. Note: *estimate.

2. Sugarcane ethanol can provide a key component of the U.S. international commitment to reduce GHG emissions.

As set forth in our previous comments, multiple studies confirm that sugarcane ethanol is the most efficient and environmentally responsible fuel in widespread commercial use today, one that affords precisely the type of environmental benefits Congress sought to promote in carving out a preference for advanced biofuels in the RFS2.⁸ It also plays a vital role in efforts to reduce GHGs from the transportation sector, which is a key element in the President's Climate Action Plan and will be to the United States' nationally determined contribution under the Paris Agreement of the Conference of Parties to the United Nations Framework Convention on Climate Change ("UNFCCC").

Through the UNFCCC, the United States has committed to significant long-term goals for reduction of GHG emissions. Such reductions cannot arise simply from one regulatory program or sector. Rather, significant reductions will need to be made across the economy, especially including transportation and transportation fuel. Increased use of sugarcane ethanol will only help the United States meet its domestic and international strategies with respect to addressing climate change. EPA should avoid taking steps—such as those proposed in the

⁸ See especially data and citations contained in prior comments cited in *supra* note 6, which we incorporate here by reference.

Proposed Rule—that could lead to reduced imports of such advanced biofuels and that prioritize other, less GHG-efficient fuels over more GHG-efficient advanced biofuels like sugarcane ethanol.

3. UNICA has supported EPA’s implementation of the RFS2 program.

As the largest trade association representing Brazilian sugarcane ethanol producers, UNICA is committed to continuing its partnership with government regulators like EPA to promote sugarcane ethanol as a renewable, low-GHG alternative to fossil fuels. In that capacity, UNICA remains dedicated to providing timely and credible data regarding the Brazilian sugarcane industry and its capacity to meet growing worldwide demand for renewable biofuels. Brazil has decades of experience in producing sugarcane ethanol and in successfully utilizing increasing volumes of the renewable product in transportation fuels. This experience has allowed UNICA to assist EPA in developing and successfully implementing the RFS2 program, both through comments on proposed rules and through other, less formal means.

UNICA submitted extensive comments on EPA’s proposed RFS2 rulemaking over the last seven years, which have generally been supportive of EPA’s program except when UNICA felt the proposals were harmful to imports of sugarcane ethanol. In prior comments, UNICA provided to EPA a detailed overview of sugarcane ethanol production in Brazil, its role as a renewable energy source, and extensive lifecycle analysis data. This information demonstrated that Brazilian sugarcane ethanol qualifies as an advanced biofuel under the EISA, a position EPA eventually adopted.⁹ UNICA herein incorporates by reference the extensive data it has provided to EPA in past comments, demonstrating the significant GHG benefits compared to fossil fuels and other biofuels. Sugarcane remains the world’s most efficient feedstock produced at a commercial scale,¹⁰ reducing GHG emissions by more than 100 percent when compared to traditional gasoline¹¹ and meeting or exceeding reductions from cellulosic ethanol and biodiesel.¹²

⁹ See UNICA, Submission of Comments: Regulation of Fuels and Fuel Additives: Changes to Renewable Fuels Standards Program, Docket No. EPA-HQ-OAR-2005-0161 (Sept. 25, 2009) (“RFS2 Comments”).

¹⁰ Seabra, J. E. A., Macedo, I. C., Chum, H. L., Faroni, C. E. and Sarto, C. A. (2011). Life cycle assessment of Brazilian sugarcane products: GHG emissions and energy use. *Biofuels, Bioprod. Bioref.*, 5: 519–532. doi:10.1002/bbb.289

¹¹ See SUGARCANE ETHANOL: CONTRIBUTIONS TO CLIMATE CHANGE MITIGATION AND THE ENVIRONMENT 17 (Peter Zuurbier & Jos Van de Vooren eds. 2008).

¹² See M. Wang & M. Wu, Life-cycle energy use and greenhouse gas emission implications of Brazilian sugarcane ethanol simulated with the GREET model, 110 INT’L SUGAR J. 527-45 (No. 1317, 2008); SUGARCANE ETHANOL: CONTRIBUTIONS TO CLIMATE CHANGE MITIGATION AND THE ENVIRONMENT (Peter Zuurbier, & Jos Van de Vooren, eds., 2008); I.C. Macedo, J. Seabra, & J. Silva, Greenhouse gasses emissions in the production and use of ethanol from sugarcane in Brazil: The 2005/2006 averages and a prediction for 2020, *BIOMASS AND BIOENERGY* 32.7 (2008): 585-95. See also 75 Fed. Reg. 14,670, 14,788, 790 (Mar. 26, 2010) (per EPA’s 2010 RFS2 rulemaking, sugarcane ethanol achieves a 61% reduction in GHG emissions compared to the gasoline baseline, while biodiesel produced from soybean oil, barely exceeds the 50% threshold necessary to qualify it as an advanced biofuel under CAA § 211(o)(1)(B)(i)).

Moreover, for many years, UNICA has consistently supported EPA's annual rulemakings to modify the statutory volume requirements for cellulosic biofuels and even EPA's consideration of potential adjustments to the volume requirements for advanced biofuels, when appropriate and necessary. In its comments on those rulemakings, UNICA provided assurances, based on its role as the primary representative of Brazil's sugarcane ethanol industry that, if the market signals are right, sufficient quantities of Brazilian sugarcane ethanol could be available to help achieve higher volumes of advanced biofuels. As will be discussed in more detail below, contrary to EPA's estimations, the Brazilian sugarcane industry continues to have this capacity to help achieve higher volumes of advanced biofuel if EPA does not take actions to discourage imports. Further, UNICA has offered its expertise and experience with respect to other issues related to renewable fuels, for example, demonstrating that it is technically and economically feasible for EPA to continue to move beyond the alleged "blend wall" and raise the allowable ethanol content in gasoline to achieve Congress' goals as expressed in the EISA.¹³

Brazil has the capacity to respond to demand of advanced biofuels when there is predictability and stability for planning. Hence, UNICA has only objected to EPA proposals where such proposals threaten real, unnecessary and unjustified harm to the sugarcane ethanol industry or result in long-term market uncertainty and instability. For example, UNICA provided comments on EPA's proposal on regulation of fuels and fuel additives, explaining in detail why EPA's proposed amendments to expand the regulatory requirements applicable to foreign renewable fuel generators of renewable identification numbers ("RIN") to all foreign renewable fuel producers was improper, unnecessary and counterproductive to the goals of the RFS2 program.¹⁴

This threat to sugarcane imports and to the integrity of the overall RFS2 program led UNICA to file comments in January 2014 and then in July 2015 when EPA adjusted advanced biofuel volumes far down below statutory volumes. In its most recent submission, UNICA provided extensive comments to the proposed 2014, 2015 and 2016 volumes for advanced biofuels and renewable fuels.¹⁵ In those comments, UNICA explained that Brazil was fully capable of helping obligated parties to achieve higher volumes of advanced biofuel and total renewable fuels than EPA estimated. UNICA took issue with how EPA proposed to combine statutory waivers, based on limited demand, to reduce advanced biofuel and total renewable fuel volumes, and showed why it was not necessary to do so. UNICA added that the volume reductions were inconsistent with the RFS2 program and did not support the President's Climate Change Initiative or the U.S.-Brazil bilateral climate initiative. Ultimately, UNICA concluded that if EPA nonetheless felt compelled to reduce volumes of advanced biofuels and total renewable fuels, it should do in a limited way and not trigger the statutory re-set in 2017.

¹³ UNICA, Submission of Comments: Clean Air Act Waiver to Increase the Allowable Ethanol Content of Gasoline to 15 Percent, Docket No. EPA-HQ-OAR-2009-2011 (July 20, 2009).

¹⁴ UNICA, Submission of Comments to: Regulation of Fuels and Fuel Additives: RFS Pathways II and Technical Amendments to the RFS2 Standards," Docket No. EPA-HQ-OAR-2012-0401 (July 15, 2013).

¹⁵ See *supra* fn. 6.

In the final rule for 2014, 2016 and 2016 RF2 volumes, EPA completely discounted UNICA's estimates and ignored its data. EPA does the same in the instant proposal, even selecting the same estimated volume of sugarcane ethanol import, 200 million gallons, despite evidence that imports could be far higher. Below, UNICA will demonstrate why EPA's analysis of Brazilian sugarcane ethanol capacity for export to the United States is unjustifiably low.

II. Brazil has the capacity to help the US achieve higher volumes of advanced biofuel.

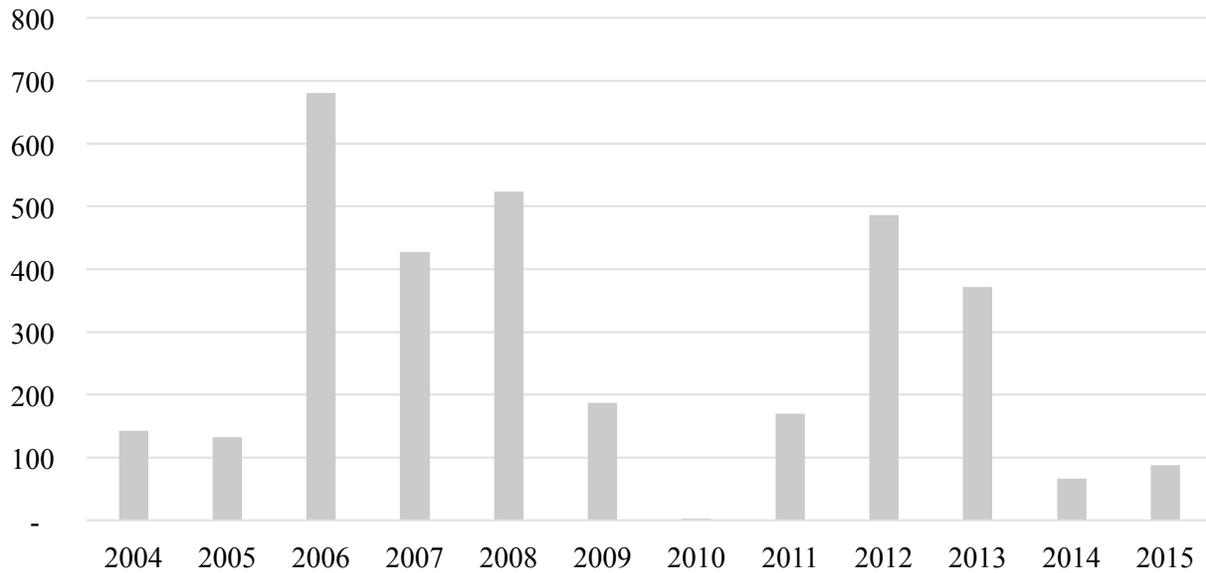
As discussed above, Brazilian sugarcane ethanol has played a key role in the implementation of the RFS2 program. Like any other agricultural commodity, Brazilian sugarcane ethanol exports are based on a number of factors, including weather conditions, sugarcane harvests, and world prices, which are beyond the control of Brazilian mills and the EPA. But a leading driver of imports into the United States is a stable and predictable demand spurred on by the consistent and rising volumes of the RFS2 as they were enacted into law. EPA controls this aspect of the market. Brazilian sugarcane can continue to play an important role for the foreseeable future, and there is sufficiently flexibility in its production and domestic use to support significant exports. But this flexibility can be undermined if EPA unnecessarily limits the volumes or otherwise creates further market uncertainty or disincentives to the industry.

1. Brazil has exported substantial volumes of sugarcane ethanol into the United States and can continue to do so -- and more.

The United States has long been an important market for sugarcane ethanol exports from Brazil. Based on Energy Information Administration's (EIA) data used by EPA in its analysis, Brazil has supplied volumes far higher than 200 million in the past ten years. EIA data shows that Brazil provided 681 million gallons to the United States alone in 2006, 427 million in 2007, and 523 million in 2008. More recently, Brazil provided 486 million gallons to the United States in 2012 and 372 million gallons in 2013. *See* Figures 2 & 3 below. While exports to the United States were far lower in 2014 and 2015, this is likely a result of the significant uncertainty regarding the RFS2 program and potential changes in statutory volumes for these past years.¹⁶ Indeed, like a self-fulfilling prophecy, if EPA lowers statutory volumes, creates uncertainty as to future volumes, and otherwise weakens market signals, it is quite possible that import volumes will remain low in 2017.

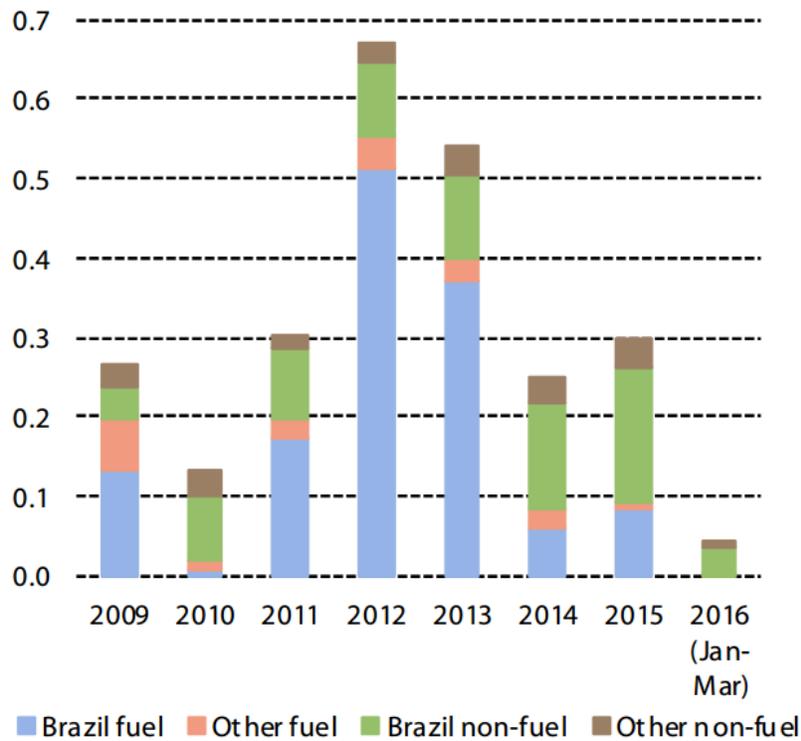
¹⁶ In our July 2015 Comments, UNICA supplied Brazilian export volumes and charts which contained volumes different from EPA whose source is EIA figures; some were higher and some lower. It appears that difference was caused by the fact that UNICA's volumes, based on data from the Brazilian Foreign Trade Secretariat ("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 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.

Figure 2 - U.S. ethanol imports from Brazil per civil year (million gallons)



Source: EIA

Figure 3 – U.S. ethanol imports by type and origin (billion gallons)



Source: LMC International – 2nd Quarter Report 2016 – page 23

Brazilian imports have indeed fluctuated over time in response to market forces, including the RFS2 program. In fact, imports of sugarcane ethanol have increased to meet the demand created by the RFS2 or other programs, especially during times when supplies of conventional ethanol were curtailed, as Figure 2 above shows. For example, the spike in 2006 imports was a result of the United States banning the fuel additive methyl tertiary butyl ether (“MTBE”) from gasoline at that time which increased demand for ethanol as a blend.¹⁷ In 2008, there were severe floods in the Midwest that impacted conventional ethanol production.¹⁸ In 2012, there were a combination of factors, leading to a corn shortfall and the high price paid to RINs from sugarcane ethanol.¹⁹ In each of these cases, the value of sugarcane ethanol increased and so did imports.

Brazil’s significant volume of sugarcane ethanol global exports amply demonstrates that it has the capacity to step up exports to the United States if the market conditions are right. As shown in Figure 1 above, Brazil currently produces close to eight billion gallons of sugarcane ethanol each year and makes on average 600 million gallons of its annual production available for other countries to import.²⁰ Preliminary figures for 2016/2017 indicate volumes of sugarcane ethanol produced are still increasing, despite the difficulties the sector has encountered in the recent years. *See* Figures 1 & 4. Specifically, according to the first projection by UNICA, Brazilian ethanol exports should hit nearly 480 million gallons in the April 2016 to March 2017 crop year.

In reality, Brazil has the capacity to export virtually any volumetric level up to the limits of its domestic logistic infrastructure. There is no law or domestic program or policy restricting exports; it is a feature of demand and price. Brazil’s sugarcane industry is flexible (up to a technical limit) and has the capability to provide significant volumes in the future where EPA does not eliminate this incentive to do so.

As an example, in 2015, Brazil imposed new rates for two federal taxes - Contribution for Intervention in Economic Domain (“CIDE”) and Social Integration Program/Contribution for Financing Social Security (“PIS/Cofins”)- both applied on pure gasoline from the refinery. At the same time, several states in Brazil changed their state tax rates (state tax for circulation of goods and services – “ICMS”).²¹ The cumulative result of these measures was an environment that highly favored hydrous ethanol: its domestic consumption increased 37 percent from 2015 to 2016 while national gasoline demand declined 7 percent in the same period. Yet Brazil’s existing mills were able to increase production to meet this increased demand during the harvest, while the installed capacity remained relative stable. Therefore, the mills have proven their ability to meet increase in demand with short notice, when the right market signals are in place.

¹⁷ *See* <https://archive.epa.gov/mtbe/web/html/faq.html> (2013 status update).

¹⁸ *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>.

¹⁹ *See infra* Figure 5.

²⁰ Average exports of the last 4 years, according to SECEX data.

²¹ Even more significantly, the states increasing their ICMS rates constituted 20% of the country’s light fleet and 30% of the country’s consumption of fuel, according to UNICA and National Association of Motor Vehicle Manufacturers (“ANFAVEA”).

Moreover, Brazil's vehicular fleet has similar flexibility. These flex cars can operate on hydrous ethanol or gasoline (current E27 in Brazil - pure gasoline blended with 27% anhydrous ethanol). The combined flexibility of production and domestic use gives Brazil significant export capacity in a relatively short turnaround.

Brazil's current capacity to export sugarcane ethanol totals at least 1 billion gallons if there is some certainty in the market place. Brazil has already exported a record of 1.35 billion gallons in just one year (2008) and 164 million gallons in one month (September 2008), proving there are feasible logistical conditions in the country to export larger volumes than those observed today. See Figure 4 below, showing exports in 2016 already higher than they were in the same period the last two years.

Figure 4: Total ethanol exports from Brazil (million gallons) accumulated from January to December (calendar year) and from January until May

Year	January - December	January-May
2005	687.01	234.68
2006	902.56	195.25
2007	932.57	351.75
2008	1,352.22	408.14
2009	873.99	272.14
2010	503.36	119.62
2011	519.77	105.08
2012	818.49	121.86
2013	766.90	231.23
2014	368.28	161.82
2015	491.83	118.27
2016*	217.74	217.74

Source: SECEX. Note: * 2016 data from January through May

Beyond this export potential, Brazil has also real abilities to expand its anhydrous ethanol production. For example, the mills and distilleries located in South-Central region have already produced 252 million gallons of the renewable additive in just one bi-weekly period (namely in the second half of August 2013). Considering a harvest season with 240 days (as it has been observed on average), this volume represents a potential production of 4 billion gallons of anhydrous ethanol per year just by the South Central producing units.²²

²² Calculation based on bi-weekly data compiled and analyzed by UNICA, with figures provided by producer associations and syndicates from Brazil's South Central region, regarding the last 5 seasons. Specifically, data of 2012/2013 – 2014/2015 available at <http://www.unicadata.com.br/index.php?idioma=2>, Sugarcane Harvest Reports,

There are no significant limits to Brazil's ability to export additional sugarcane ethanol when volumetric requirements create a need for additional advanced biofuels. As mentioned before, there are no legal impediments to prevent Brazil from exporting 200 million, 500 million or even 1 billion or more gallons of sugarcane ethanol to the United States if the demand were created by higher volume requirements (as well as a shortage of corn-based ethanol). Significantly, the deadline for the final rule making coincides with the end of the current sugarcane harvest season in Brazil. A strong signal from EPA in November will definitely provide the mills with the necessary notice they need to plan for more volumes to be available for exports to the U.S. market in the 2017/2018 harvest.

2. EPA's rationales for its estimated low volumes of sugarcane ethanol imports to the United States are unsupported and inaccurate.

In both its final rule in 2016 and the Proposed Rule for 2017, EPA estimates that sugarcane ethanol imports will not be likely to exceed 200 million gallons, and could be less, based on an averaging of annual import numbers, as presented by EPA, between 2010 and 2015.²³

The main overall problem with EPA's response is that it ignores the key role EPA plays in impacting import volumes: the lower the volume of advanced biofuels set by EPA, the less an incentive Brazil has to export to the United States as opposed to other countries such as Japan, China and EU member states. As will be discussed below, volumes of sugarcane ethanol available for export do not fluctuate solely based on production but mainly upon market conditions. The RFS2 program can create such market incentives.

EPA's rationales, stated in the final rule for 2016 volumes and the Proposed Rule, for estimating such a low volumes are not supported and inaccurate.

a. Brazil's exports of sugarcane ethanol do fluctuate, but based on factors which include the RFS2.

EPA questions the volume of U.S. imports likely in a given year by pointing to the historic fluctuation of such imports.²⁴ It is true as EPA asserts that Brazilian exports to the United States showed high variation over the years. *See* Figure 2 above. This variation reflects both the commercial availability of conventional ethanol and other fuels as well as the significant uncertainty of U.S. policy for biofuels. In particular, there has been significant uncertainty about the annual RFS2 volumes since at least 2013, which led to great uncertainty as to how much sugarcane ethanol might be imported to reach those volumes. This uncertainty has hindered the development of medium and long-term contracts between U.S. importers and Brazilian exporters.

By way of example, the value of sugarcane ethanol to the RFS2 program, and thus the likelihood of increased imports, can be measured by the price differential between a RIN

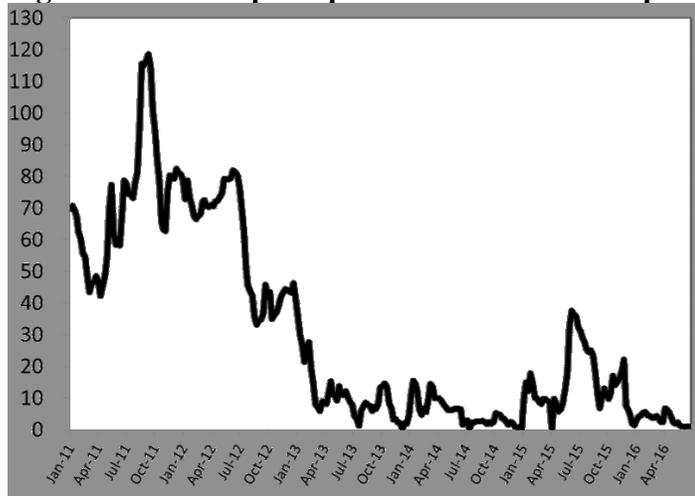
Final Numbers – Past Harvests; data of 2015/2016 and 2016/2017 available at <http://www.unicadata.com.br/listagem.php?idMn=63>

²³ 81 Fed. Reg. at 34797-798, 80 Fed. Reg. at 77,477-478.

²⁴ 81 Fed. Reg. at 34,797.

generated by sugarcane ethanol (D5) and a RIN generated by conventional ethanol (D6). D5 RINs can be used to meet advanced fuel and total renewable fuel compliance requirements; D6 RINs can only be used for the latter. When the price differential between a D5 and D6 is high enough, imports increase as there is a price premium paid by compliance entities seeking D5 RINs for compliance purposes, and blenders can monetize this premium. When the price differential is low, compliance entities may simply choose to blend more conventional ethanol, and there is no incentive for blenders to import sugarcane ethanol. The relationship of the D5/D6 RINs can be seen in the following Figure 5.

Figure 5. D5 RIN price premium over D6 RIN price through June 2016 (cents/RIN)



Source: OPIS weekly RIN prices

The significant variation in prices between RINs arises both from market forces (*e.g.* availability of corn-based ethanol/removal of E10 blendwall) and from the constant changes in the existing regulatory RFS2 framework. However, this fluctuation should not be used to generate doubts about Brazil's potential to supply part of the U.S. biofuel mandate. If the D5/D6 RIN spread is wide enough and if the rules are transparent and long-lasting, one could reasonably expect Brazilian exports to the United States to expand even in the short term. For instance, 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. *See supra* Figure 4.

As previously explained, the ethanol currently destined for the Brazilian domestic market could be directed to the export market if there were incentives to do so. As the fleet of Brazilian vehicles is flexible and mills could accommodate higher production, domestic demand would have no relevant impact on export supply in Brazil.

In short, EPA cannot fairly question the Brazilian export capacity simply by saying there is volatility in exports since the volatility partially is caused by EPA's own changes and uncertainties in the U.S. market, and there is evidence that volumes could increase with more certainty.

b. The fluctuating global price for sugar will have limited impact on Brazil's capacity to produce exports of sugarcane ethanol.

EPA asserts that the fluctuating price of sugar around the world causes Brazilian sugarcane ethanol production to fluctuate.²⁵ This is not a necessary nor inevitable conclusion. As mentioned above, the Brazilian sugar industry possesses some flexibility in its production and can produce both sugar and sugarcane ethanol. However, this flexibility is limited by the capacity of the crushing equipment to about 10 percent of the sugarcane processed. If the price of sugar went up substantially, a mill could not shift all its production to sugar. It would continue to make the ethanol demanded by the market.

Therefore, the impact of the sugar price on ethanol supply is quite restricted. Furthermore, about 20% of processed sugarcane is carried out by mills that do not produce sugar. The production of these mills would not be affected by the price of sugar. It is worth noting that Brazil is responsible for over 40% of world sugar market, and Brazilian mills are constantly securing contracts for future delivery without any reported problem with default. If there is predictability about the American biofuels market, Brazil will have incentive to negotiate medium and long-term export contracts with U.S. refiners, providing the basis for safely secure supply for the sugar *and* sugar ethanol markets.

c. Domestic gasoline consumption will not limit Brazil's export capacity.

EPA states that Brazilian exports of sugarcane ethanol will be constrained by its own domestic needs to meet rising gasoline demand.²⁶ This is not accurate. While Brazil has fully integrated sugarcane ethanol into its transportation fuel mix, replacing 40 percent of its gasoline needs with ethanol,²⁷ it has done so without significant impact to its ability to export high volumes of sugarcane ethanol. Indeed, Brazil has 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.

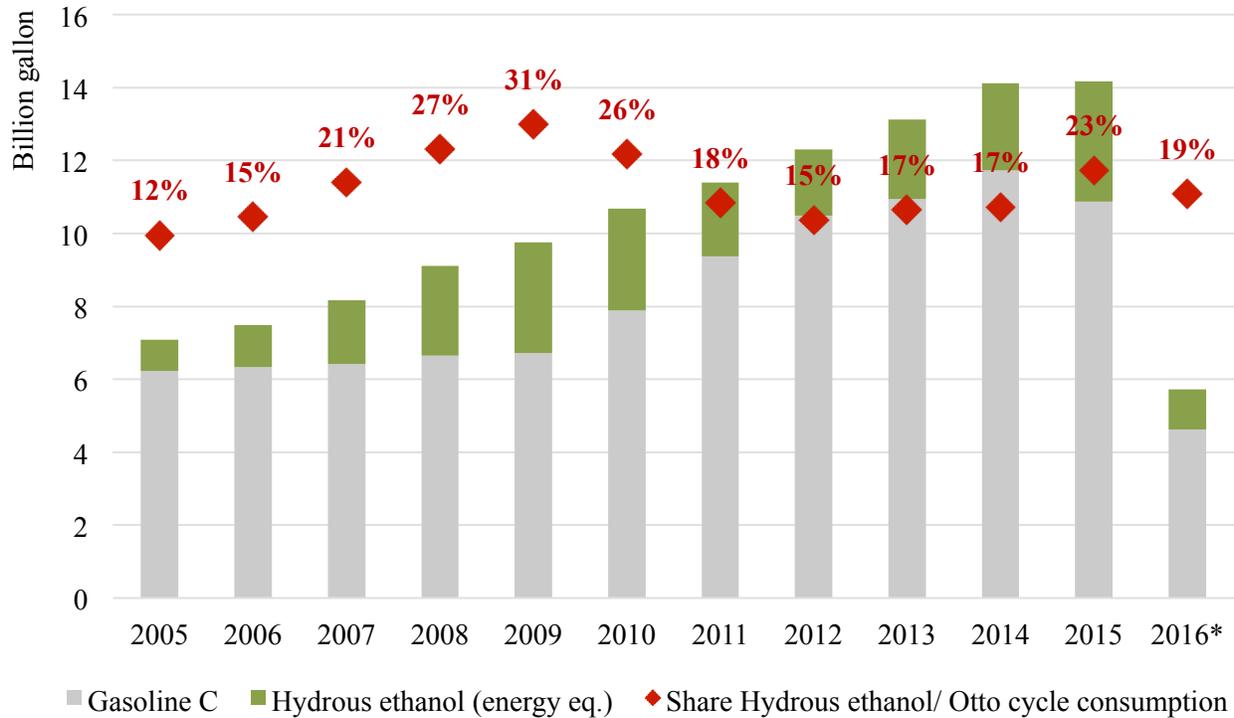
Further, gasoline consumption is no longer rising. The economic and political crisis recently experienced by the Brazilian industry has reduced activity, income and domestic consumption of fuels in general. In 2015, consumption of light-vehicle fuel dropped 1% after several years with an average annual growth rate above 5% per year. For 2016, the drop in demand for fuels should be even greater. *See* Figure 6 below.

²⁵ *Id.*

²⁶ 80 Fed. Reg. 34,797.

²⁷ UNICA, "The Brazilian Experience," available at <http://sugarcane.org/the-brazilian-experience>.

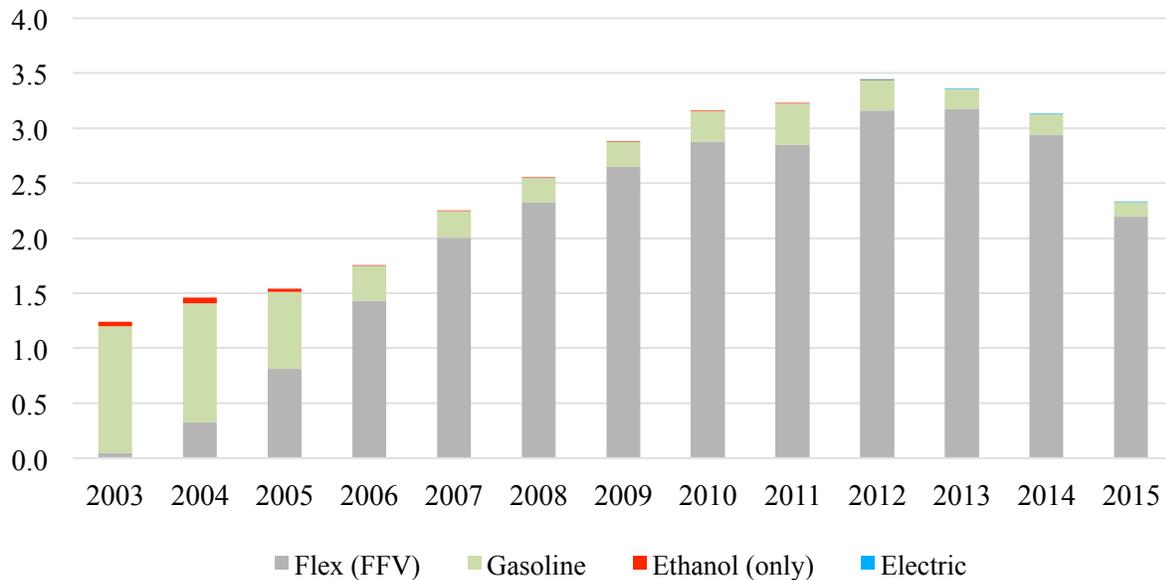
Figure 6. Annual consumption of gasoline C and hydrous ethanol in Brazil, and the participation of the biofuel on the total Otto cycle demand (billion gallons – energy equivalent)



Source: ANP. Note: *2016 accumulated January-May

Further, the drop in income, the increase in unemployment and the credit crunch caused a drop in vehicle licensing of 25% in 2015 versus 2014, and of 19% from January to April of 2016 compared to the same period of 2015. *See* Figure 7 below. A recent projection of the National Association of Motor Vehicle Manufacturers (ANFAVEA) indicates that the car sales should decline 19% in 2016 against 2015.

Figure 7: Annual licensing of automobiles and light vehicles (Otto cycle) in Brazil - million units



Source: ANFAVEA. Note: Otto cycle does not include diesel-run light vehicles

On the other hand, the economic crisis has created a boon for Brazilian exports, with the value of the Real dropping in comparison to the dollar and other currencies. The economic crisis, therefore, would result in greater exports of sugarcane ethanol where there is demand.

d. Exports to China will not reduce export capacity to the United States.

EPA also asserts that the growing export of Brazilian sugarcane ethanol to China will limit its ability to import significant volumes to the United States.²⁸ This is also not accurate. It is true that China continues to be a non-traditional destination for Brazilian exports of sugarcane ethanol but it is still a minor market. According to SECEX data, in 2015 Brazil’s total ethanol exports to China reached 32 million gallons, which corresponded to 6.41% of all Brazil’s exports in that year. In comparison, Brazilian total ethanol exports to the United States at same year totaled 242 million gallons, corresponding to 49% of Brazilian exports in the period. Moreover, China does not even appear in the ranking of the main destinations of Brazilian in last decade,

²⁸ 80 Fed. Reg. at 77,477.

while SECEX database shows that there were Chinese imports from Brazil only in a few years
See Figures 8 and 9 below.

Figure 8. Top 10 destinations of Brazilian ethanol exports from 2005 until 2015

Destination	Share of Brazil's total ethanol exports
U.S.	35,30%
CBI	15,93%
Netherlands	12,85%
South Korea	10,30%
Japan	7,59%
India	3,35%
Nigeria	2,91%
Sweden	1,82%
United Kingdom	1,56%
Mexico	1,16%
Others (61 countries)	7,23%

Source: SECEX.

Figure 9. Brazilian ethanol exports to China per year

Civil year	Thousand US\$	Million gallons	China/Brazil
2007	27.3	12.4	0.00%
2008	1,692.8	1,068.8	0.08%
2012	9,225.1	3,947.9	0.48%
2015	54,212.2	31,508.2	6.41%

Source: SECEX.

Ethanol export from Brazil is concentrated in just few (and traditional) destinations, as shown above in Figure 8, different from national sugar exports. Indeed, Brazil exports sugar to 120 countries, on average.

Clearly, trade to China would need to increase significantly for it to impact exports to the United States. Once again, EPA can assure that the Brazilian imports increase to the United States by maintaining a predictable and sizable growth in volume of advanced fuel under the RFS2 program.

e. California's Low Carbon Fuel Standard should promote additional imports of sugarcane ethanol.

UNICA has cited to the California Low Carbon Fuel Standard ("LCFS") as providing an additional incentive for the continued import of sugarcane ethanol. In the 2015 RFS2 rule, EPA discounted the relevance of the LCFS as a factor supporting increased sugarcane ethanol imports by stating that sugarcane ethanol volumes have "fallen off in recent years."²⁹ This statement is an exaggeration of fact and unjustifiably discounts the significant role that California still envisions for sugarcane ethanol.

The LCFS is a performance-based regulation enacted in 2009 that requires regulated parties (*e.g.* oil producers and imports to California) to reduce the carbon intensity of their fuel mix by 10 percent by 2020.³⁰ As initially established, the LCFS sets targets that decline annually beginning with a 0.25 percent reduction in 2011 and increasing to a 10 percent reduction by 2020. Regulated parties can produce their own low carbon fuels, buy fuels on the market or purchase credits from others. The California Air Resources Board ("CARB") began implementation of the law in 2010.

CARB has stated that sugarcane ethanol would likely play a "key compliance role" in the LCFS.³¹ Under the LCFS, California rates sugarcane ethanol as a high-performing low-carbon fuel.³² Indeed, sugarcane ethanol is among the principle commercial-scale ethanol fuels capable of meeting the LCFS's lifecycle GHG emissions requirements.³³ For this reason, sugarcane

²⁹ 80 Fed. Reg. at 77,478

³⁰ <http://www.arb.ca.gov/fuels/lcfs/eos0107.pdf>

³¹ 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

³² See Cal. Energy Comm'n, *Transportation Energy Forecasts and Analyses for the 2009 Integrated Energy Policy Report: Final Staff Report*, at 86 (May 2010), *available at* <http://www.energy.ca.gov/2010publications/CEC-600-2010-002/CEC-600-2010-002-SF.PDF> ("Currently, Brazilian sugarcane ethanol has the lowest carbon life-cycle rating of all of the different types of ethanol that are currently being produced at commercial-sized facilities."); Cal. Air Res. Bd., Carbon Intensity Lookup Table for Gasoline and Fuels that Substitute for Gasoline, Table 6), *available at* http://www.arb.ca.gov/fuels/lcfs/121409lcfs_lutables.pdf; *see also* Sonia Yeh & Julia Witcover, Univ. of Cal. Davis Inst. of Transp. Studies, *Status Review of California's Low Carbon Fuel Standard*, at 9 (Jan. 2014), *available at* http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=2008 ("The relatively low [carbon intensity] ratings of sugarcane ethanol and waste biodiesel translate into more \$/gal than corn ethanol or soy biodiesel.").

³³ Yeh & Witcover, *supra* note 32 at 4 (sugarcane ethanol is the second most consumed biofuel under the LCFS).

ethanol should continue to be a major renewable fuel source in California, which imported 90 million gallons of sugarcane ethanol in 2012 alone.³⁴

In fact, on May 9, 2016 CARB released new certified ethanol pathways for the LCFS which include a number of sugarcane mills from Brazil. Under this new certification, CARB reassessed the carbon intensity of the different fuels, using updated methodology and new indirect land use change (“ILUC”) values for all feedstocks.³⁵ Brazilian ethanol has the lowest ILUC penalty compared to all fuels available for use in California.³⁶ Once again Brazilian ethanol proved its great lifecycle analysis and scored low carbon intensity numbers that should help drive Brazilian imports to California, since the low carbon intensity translates to an monetary value that will play in favor of importing the Brazilian product. 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.

Despite the bright outlook for sugarcane ethanol imports into the LCFS, EPA discounts the matter with an unjustifiably gloomier observation that imports of sugarcane ethanol are trending downward. It is true that the most recent Status Review of the LCFS Program cites a downward trend in credits derived from ethanol from 2011 to 2015, as more advanced biofuels have been used in the program, but sugarcane ethanol remains an integral part of that program. Sugarcane ethanol generated 5 percent of total credits for 2011–2015, and contributed close to 11 percent of credits in 2012–2013 as the 2012 U.S. drought affected domestic corn production.³⁷ While the 2014 sugarcane volumes used in the LCFS program were lower than in 2013, this does not support EPA’s characterization of a years-long decrease nor indicate that sugarcane ethanol is no longer an important component of the program.

f. The Circle trade will not increase GHG emissions.

In its 2015 RFS2 rule, EPA raised the argument asserted by “several stakeholders” that sugarcane ethanol imports into the United States should be reduced due to the “circle trade,” a

³⁴ Cal. Elec. Transp. Coal., *California’s Low Carbon Fuel Standard: Compliance Outlook for 2020*, at 11 (June 2013), available at <http://www.ceres.org/resources/reports/california2019s-low-carbon-fuel-standard-compliance-outlook-for-2020>.

³⁵ CARB, Low Carbon Fuel Standard (LCFS) Certified Ethanol Pathways Release (May 9, 2016), http://www.arb.ca.gov/fuels/lcfs/05092016notice-pathway_release.pdf; see <http://www.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm> for list of certifications (search sugarcane).

³⁶ ARB, Detailed Analysis for Indirect Land Use Change, http://www.arb.ca.gov/fuels/lcfs/iluc_assessment/iluc_analysis.pdf at 25.

³⁷ Yeh & Whitcover, Status Review of California’s Low Carbon Fuel Standard, 2011–2015 (May 2016) at 3, available at https://its.ucdavis.edu/research/publications/?frame=https%3A%2F%2Fitspubs.ucdavis.edu%2Findex.php%2Fresearch%2Fpublications%2Fpublication-detail%2F%3Fpub_id%3D2634

term used to describe the market situation in which Brazil exports sugarcane ethanol to the United States while the United States exports corn ethanol to Brazil.³⁸ This argument maintains that two-way trading negates the benefit of importing low lifecycle GHG-emitting ethanol due to GHG emissions arising from ocean transport. Such a two-way trading pattern can exist where conditions create demand in the relevant markets. For example, poor harvest conditions in Brazil might make corn ethanol more competitive in price there, while a drought in the United States might make sugarcane ethanol more competitive here.

EPA initially observes that any circular trade has been limited over time (according to EPA, 21% of all ethanol imports and exports between the U.S. and Brazil from 2010-2014) and has not been a major factor driving imports and exports of ethanol. Nevertheless, EPA adds that the degree that circle trade may increase as a result of a higher RFS volume requirement for advanced biofuels, any GHG benefits associated with the advanced biofuels volume requirement would be reduced.³⁹

Were it to occur in 2017 or any time in the future, such two-way trade should not be an issue of concern for EPA. First the issue is not germane to EPA's rulemaking process. As EPA itself notes, trade in ethanol is impacted by a number of factors, including government laws and regulations promoting biofuels. Since these laws and regulations are not uniform across jurisdictions, divergent market incentives for sugarcane and corn ethanol can make such two-way trading more likely. But such foreign market incentives and whether other nations' demands are met by exporting domestic non-advanced biofuels are irrelevant to EPA's analysis. EPA can and should look only to fulfilling the intent of the RFS2 program.

In any event, the life-cycle GHG emission measurements of sugarcane ethanol already take into account transportation costs of such fuel to the United States. Even after including those emissions, EPA concluded that Brazilian sugarcane ethanol offered significant GHG benefits when compared to the gasoline baseline and classified it as an advanced biofuel. Further, emissions associated with the transportation of sugarcane ethanol to the United States constitute an insignificant portion of total lifecycle GHG emissions. Finally, any GHG emissions associated with the export of domestically produced corn ethanol to Brazil cannot be attributed to the RFS2 program or to EPA's decisions regarding advanced biofuel volume requirements under that program; they are attributed to the market conditions which produce them. Ultimately, rather than be concerned with two-way trading, EPA should focus on encouraging Brazilian imports of sugarcane ethanol as a preferred policy, given the fuel's low GHG lifecycle as compared to conventional ethanol.

3. EPA Acknowledges that Brazilian sugarcane will play an important role in the future of RFS2

³⁸ 80 Fed. Reg. at 77,478.

³⁹ *Id.*

With increasing capacity to export sugarcane ethanol, Brazil can continue to play an important role in the implementation of RFS2 as it is expected to play in the LCFS. Indeed, EPA fully expects sugarcane ethanol imports from Brazil to play a significant role in the ability of obligated parties to meet advanced biofuel and total renewable fuel volume requirements. For example, EPA reasonably predicts that the advanced biofuel that could fulfill the need for additional volumes to meet the 9 billion gallon advanced biofuel requirement for 2017 would primarily be imported sugarcane ethanol or biodiesel.⁴⁰ UNICA supports EPA's view that the 2017 proposed volume requirements for advanced biofuel and total renewable fuels can be met with varying amounts of imported sugarcane ethanol, but could certainly be higher than 200 million gallons EPA estimates, and could even reach the volumes suggested by EPA in its volume scenarios if EPA helped create the market incentive by significantly raising volumes and doing so consistently.⁴¹ Moreover, EPA even uses scenarios regarding costs of compliance for the proposed increase in advanced biofuel standards in 2017 advanced biofuel standards where the entire increase proposed by EPA is met with sugarcane ethanol from Brazil.⁴²

UNICA urges EPA to consider raising the volumes of advanced biofuels to ensure that sugarcane ethanol can continue to play such an important role in fostering compliance.

IV. Significant reductions under the cellulosic waiver are not justified.

EPA proposes to reduce 2017 volumes of advanced biofuels by 5 billion gallons and total renewable fuel by 5.2 billion gallons from statutory levels of 9 billion and 24 billion respectively. By contrast, EPA proposes to reduce the 2017 volumes of cellulosic biofuel by roughly 5.2 billion gallons, from 5.5 billion to 312 million gallons.⁴³ EPA justifies the reductions in advanced biofuels through the use of its waiver authority for cellulosic biofuel, section 211(o)(7)(D)(i).⁴⁴ For total renewable fuels, it combines the cellulosic waiver authority with its "general" waiver authority under section 211(o)(7)(A).⁴⁵ Both provisions, EPA asserts, may take into account the ability of the market to supply such fuels for use as transportation fuel, *e.g.* market supply, and the ability of the available renewal fuels to be used as transportation fuels, *e.g.* market demand.⁴⁶

⁴⁰ 81 Fed. Reg. at 34,787.

⁴¹ *Id.* at 34,799 and Table II.E-1 (showing various scenarios illustrating possible compliance with proposed 2017 targets using varying amounts of sugarcane ethanol, including a scenario where 400 million, 638 million and over 1.4 billion gallons of sugarcane ethanol are used for compliance purposes).

⁴² *Id.* at 34,802, Table II.F-2.

⁴³ 81 Fed. Reg. at 34,785 Tables I-1, II-1

⁴⁴ 42 U.S.C. § 7545(o)(7)(D)(i).

⁴⁵ 42 U.S.C. § 7545(o)(7)(A).

⁴⁶ 81 Fed. Reg. at 34,782.

As an initial matter, UNICA does not believe that section 211(o)(7)(D)(i) gives EPA completely unfettered discretion to reduce cellulosic ethanol, advanced biofuel or total renewable fuels.⁴⁷ Rather, that section authorizes EPA to reduce cellulosic biofuel volumes when "the projected volume of cellulosic biofuel production is less than the minimum applicable standard under paragraph (2)(B)." *Id.* Section 211(o)(7)(D)(i) then authorizes EPA to lower the volumes for advanced biofuels and total renewable fuels *at most* by an amount equivalent to the projected shortfall for cellulosic biofuel. EPA can lower these volumes by a lesser amount but not by a greater amount. *Id.* Standing by itself, then, EPA has no authority to reduce advanced biofuel and total renewable fuel volumes in 2017 below its reduction of 5.2 billion gallons of cellulosic biofuel, the cellulosic shortfall.⁴⁸ To EPA's credit, it does not use the entire amount of the cellulosic shortfall for advanced biofuels, allowing some 200 million gallons to be met by other advanced biofuels (ironically, the exact amount EPA estimates for sugarcane ethanol imports).

However, EPA does utilize nearly the entirety of the shortfall and may, in fact, decide to increase that reduction in a final rule. Hence, UNICA believes it is important to set several matters straight. First, a reduction of advanced biofuels and total renewable fuels commensurate with a reduction in cellulosic biofuels is not a given. EPA has discretion to reduce amounts *up to* the volume reductions of cellulosic biofuels. This is logical because without the cellulosic biofuel volumes, obligated parties may theoretically find it difficult to meet the nested advanced biofuel and total renewable fuel volume requirements. Hence, it may make sense to make equal reductions for all three fuels *where there are insufficient volumes of advanced biofuels or total renewable fuels to make up the difference*. But Congress again demonstrated its preference that EPA first try to meet any shortfalls with other advanced biofuels. Otherwise, it would have required EPA to reduce volume requirements instead of permitting it to do so. Indeed, EPA has

⁴⁷ In its July 2015 and January 2014 comments, UNICA set forth in great detail its arguments for why reductions of the statutory volumes for advanced fuel and total renewable fuels in earlier EPA proposals were not consistent with the CAA's waiver provisions. EPA, in its Proposed Rule, once again plans to combine its waiver authorities to reduce total renewable fuel volumes, focusing on assertions of market demand. UNICA does not believe such assertions are correct nor can the waivers be used in this way. UNICA continues to assert that reductions of advanced biofuels and total renewable fuels cannot and should not go well below the amounts EPA proposes for cellulosic ethanol and should only be based on inadequate market supply. However, since EPA did not use the general waiver authority to reduce advanced biofuels and did not reduce advanced biofuels beyond the full estimated shortfall of cellulosic fuel, UNICA will not focus on the issues it has raised in the past over the use of general waivers based on inadequate demand or to go beyond the cellulosic shortfall. To the extent EPA does reduce the final volume of advanced biofuels in 2017 beyond the cellulosic shortfall using the general waiver, UNICA incorporates its prior assertions that this is neither allowed under the CAA nor necessary.

⁴⁸ For purposes of these comments, UNICA is assuming EPA has properly estimated reasonable production figures for cellulosic ethanol in 2017, but does not waive the argument that the volume should be higher.

addressed similar shortages of cellulosic biofuels in past rulemakings by making up volumes through advanced biofuels.⁴⁹

As stated above, Brazil has the capacity to provide significant amounts of advanced biofuels to help with RFS2 compliance, where the proper market incentives exist. Yet it does not appear that EPA made any detailed effort to calculate exactly how much sugarcane ethanol might be available to support a lower reduction under section 211(o)(7)(D)(i); it just assumed that, for reasons discussed above, Brazil was unlikely to import more than 200 million gallons of sugarcane ethanol into the United States. As indicated above, EPA's assumptions about the availability of sugarcane ethanol imports are incorrect. Brazil has the installed capacity to make available significantly more gallons of advanced biofuels for exports in 2017 if EPA helps drive the market with higher volume requirements than it now proposes.

V. Significantly lowering the volumes for advanced biofuels, when not necessary, is contrary to the policy of the RFS2 Program and the President's climate change program.

UNICA asserts that EPA's proposed volume reductions are not only unnecessary and not supported, but they are also inconsistent with the purpose of the RFS2 program and the President's climate policy. EPA should reconsider its proposal to reduce the required volume of advanced biofuels, for 2017, and possibly beyond. In the Proposed Rule, EPA proposes to require purchase or production of only 4 billion gallons of advanced biofuels in 2017, even though the statute specifies that 9 billion gallons shall be required for that year. The RFS2's clear policy and EPA's past actions strongly favor advanced biofuels over fuels with higher GHG lifecycle emissions. Moreover, the President's climate change agenda, including his June 2013 Climate Action Plan⁵⁰ and 2015 climate agreement with Brazil,⁵¹ also expressly favor biofuels for

⁴⁹ See, e.g., 78 Fed. Reg. 9,282, 9,295/3 (Feb. 7, 2013) (“However, in general we believe that it would not be consistent with the energy security and greenhouse gas reduction goals of the statute to reduce the applicable volume of advanced biofuel set forth in the statute if there are sufficient volumes of advanced biofuels available, even if those volumes do not include the amount of cellulosic biofuel that Congress may have desired.”); 77 Fed. Reg. 1,320, 1,331-37 (Jan. 9, 2012) (explaining that other sources of advanced biofuels could make up for a projected 490 million gallon shortfall in cellulosic biofuels, and, for that reason, declining to reduce the required volume for advanced biofuels); see also *Am. Petroleum Inst. v. EPA*, 706 F.3d 474, 480-81 (D.C. Cir. 2013) (“In the 2012 RFS Rule, EPA concluded that other sources of advanced biofuels, in particular imported sugarcane ethanol and biomass-based diesel, could make up for the 490 million gallon shortfall in cellulosic biofuel it had projected for 2012. The agency accordingly declined to reduce the applicable volume of advanced biofuels.”).

⁵⁰ Executive Office of the President, The President's Climate Action Plan (June 2013), available at <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

⁵¹ U.S.-Brazil Joint Statement On Climate Change, available at <https://www.whitehouse.gov/the-press-office/2015/06/30/us-brazil-joint-statement-climate-change>

the “role [they] play in increasing our energy security, fostering rural economic development, and reducing greenhouse gas emissions from the transportation sector.”⁵²

Further, the United States will require a comprehensive approach to achieve significant GHG reductions to meet its international commitments under the 2015 UNFCCC Paris Accord. Reliance on the power sector GHG regulations, such as the Clean Power Plan, will not be sufficient to meet U.S. commitments and long-term goals, and some may not survive judicial scrutiny fully intact. While the United States has other programs, including in the transportation sector, which reduce GHG emissions, it will need to use every mechanism available. Increased use of advanced biofuels, including sugarcane ethanol, can play an important role in the national climate strategy.

As set forth above and in prior comments, advanced biofuels have considerably lower lifecycle GHG emissions than fossil fuels and conventional biofuels. For that reason, Congress wrote the RFS2 to favor advanced biofuels over not just fossil fuels, but also over conventional biofuels.⁵³ Congress’ preference for the production and use of advanced biofuels over other fuel sources was manifested, not just in statements made during passage of the RFS and RFS2, but in the structure of the RFS2 itself. Specifically, Congress (1) imposed a minimum volume requirement for advanced biofuels, and (2) mandated that, by no later than 2016, all increases in the RFS2 be met *exclusively* by using advanced biofuels.⁵⁴ Those aspects of the RFS2 make clear that Congress intended the measure to promote advanced biofuels, such as sugarcane ethanol, not just over fossil fuels, but also over conventional biofuels with higher lifecycle GHG emissions.

EPA’s proposed significant reductions in the required volume of advanced biofuels would defeat Congress’ intent in passing the RFS2. Congress enacted the RFS2 program to ensure that advanced biofuels made up a greater share of America’s fuel supply, but EPA’s Proposed Rule expressly reduces that share and that of total renewable fuel. Sugarcane ethanol is presently the largest, most commercially-viable source of advanced renewable fuels, yet the proposed rule unjustifiably discounts it when calculating required advanced biofuel volumes for 2017. And while Congress structured the EISA so that advanced biofuels would supplant conventional biofuels in the nation’s fuel supply, the Proposed Rule discourages the purchase of cleaner, more efficient advanced biofuels such as sugarcane ethanol while incentivizing the purchase of less-eco-friendly conventional fuels and fossil fuels.

⁵² Climate Change Action Plan, *supra* note 50 at 8.

⁵³ *See, e.g.*, 153 Cong. Rec. H16659, 16742 (2007) (statement of Rep. Peterson) (noting that EISA “set[s] the stage for the next generation of ethanol, which is going to be cellulosic, and for new feedstocks for biodiesel”); 153 Cong. Rec. H16659, 16751 (2007) (statement of Rep. Stark) (“I hope that the environmental safeguards contained in the Renewable Fuel Standard—which mandates production of 36 billion gallons of biofuels by 2022—will quickly push production away from corn ethanol and toward advanced cellulosic fuels.”); 153 Cong. Rec. H16659, 16751 (2007) (statement of Rep. Van Hollen) (“I am especially pleased that this RFS includes a substantial requirement for advanced biofuels from a variety of different feedstocks . . .”).

⁵⁴ 42 U.S.C. §7545(o)(2)(B).

The proposed rule will inevitably have a number of detrimental effects. First, it will reduce investment in, and production of, advanced biofuels, as investors and producers reevaluate EPA's commitment to the standards and goals Congress clearly set out in the RFS2. Second, by reducing incentives to produce and supply advanced biofuels, the Proposed Rule will expand the use of less-eco-friendly fuels, increasing GHG emissions and exacerbating the very environmental harms the EISA was meant to correct. Finally, EPA's proposal reduces the advanced biofuels volume requirements below 20 percent for 2017, as was done for 2015 and 2016, and indeed reduces the advanced biofuels requirement by more than 50 percent (it also reduces the total renewable fuels volume requirements by 20 percent in 2017). These reductions exceed the thresholds for a statutory reset under CAA section 211(o)(7)(F) (reductions below 20% for two consecutive years or at least 50% for one year), creating the need for EPA to reset and lower statutory volumes for advanced biofuels in 2017 and beyond under CAA section 211(o)(7)(F).⁵⁵ The potential reset, which is not even discussed in the Proposed Rule, creates further uncertainty and discourages the production and supply of advanced biofuels, just when they are most needed.

Those consequences amply demonstrate why and how EPA's proposed rule does not comport with Congress' intent in enacting the EISA. Given the statute's unequivocal preference for the use of advanced biofuels over conventional biofuels, a policy that undermines the production and supply through import of sugarcane ethanol is fundamentally at odds with the environmental goals of the RFS2.

VI. To the extent EPA will lower volumes of advanced biofuel, it should lower them as little as possible.

Although, as described above, UNICA does not believe the proposed level of reductions of advanced biofuels is supported, if EPA nonetheless decides to move in this direction, it should lower the volumes only to the absolute extent it finds necessary, and certainly no lower than as proposed. Indeed, in view of the statutory reset provisions, EPA should ensure if at all possible that the reduction of advanced biofuels from statutory levels does not again reach 20 percent in 2017, and certainly not 50 percent, which would independently trigger the statutory reset provision.

Without waiving our concerns about EPA's need and process for reducing statutory volumes so significantly, UNICA is supportive of EPA's efforts to increase 2017 volumes for advanced biofuels as well as for total renewable fuels from 2016 and so continue to drive significant growth in production of the fuels into the future. UNICA further supports EPA's intention to move beyond the blendwall issue and its perceived constraints; Brazil has clearly demonstrated that the motor vehicle industry can quickly adopt and adapt to higher ethanol blends. Therefore, even though UNICA believes the volumes should be higher, they should not

⁵⁵ *Id.* § 7545(o)(7)(F).

be further reduced beyond the proposed amounts as some critics of the program will no doubt encourage the Agency to do. EPA should ensure that the reductions in volume of advanced biofuel be made as minimal as possible.

UNICA is particularly concerned with the fact, as stated above, that the proposed 2017 reduction of advanced biofuel fall below 20 percent, as it in 2015 and 2016 volumes, and 500 million gallons beyond the 50 percent threshold of section 211. EPA has not yet stated how it intends to deal with the reset for advanced biofuels caused by the 2015 and 2016 volumes. The proposed 2017 reductions, if final, would also result in a statutory reset in 2017 and beyond for advanced biofuels under section 211(o)(7)(F). EPA has again provided no indication in its proposal as to how such a reset would occur and when, including whether and how the 2017 volume reductions might factor into a reset caused by prior years, 2015 and 2016. Since the reset provisions have never been used, there is a great degree of uncertainty over how they might be implemented, and how a *third* year of 20% reductions or an initial year of 50% reductions might change the overall structure of the RFS2 program going forward. Such reductions will inevitably be used by opponents of the RFS2 program to prove their allegation that it does not work and should be scrapped.

Hence, the reductions EPA claims are necessary could have far-reaching and long-term yet uncertain implications for the entire RFS2 program. EPA's ultimate intent with regard to the reset is unclear. But the implications of these volumetric discounts are critical to the entities functioning within the RFS program, and raise significant uncertainties which can adversely impact the market for advanced biofuels. As described above, this uncertainty can further limit the growth in production and use of advanced biofuels such as sugarcane ethanol, making the inadequacy of supply a self-fulfilling prophesy. At the very least, EPA should explain its understanding as to the reset provisions, the cumulative nature of the multiple triggers, and its current intentions with regard to future volume requirements. The better route would be to keep the 2017 volumes above the thresholds and so obviate the concern.

VII. EPA should consider in the future alternative ways of meeting RFS2 goals with advanced biofuels.

EPA's predicament is that there is insufficient cellulosic ethanol to meet statutory volumes and the RFS2 program's goal for significant GHG reductions. EPA believes it cannot fill that gap with ethanol due to the blend wall and eventual limits on corn-based ethanol volumes. This predicament has caused the Agency to reduce volumes of nearly all categories of biofuels, and triggered a statutory reset for advanced biofuels, when there are many millions of gallons of sugarcane ethanol and biodiesel available. If EPA will be considering changing statutory volumes as part of a re-set, it should consider other methods of ensuring high volumes of low GHG lifecycle biofuels are produced and blended into the nation's fuel supply.

EPA's own lifecycle analysis show 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.⁵⁶ This is significant since EPA's regulations require cellulosic fuel have a GHG emission savings of at least 60% when compared to gasoline. In the future, EPA could institute a regulation allowing compliance entities to use advanced fuels with a GHG emission savings superior to 60%, like sugarcane ethanol, to meet the cellulosic shortfall. This would incentivize imports of higher volumes of sugarcane ethanol but at no increase in GHG lifecycle emissions. Further, cellulosic ethanol would still be favored since sugarcane ethanol would only 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 a specified volume of the product be blended into the gasoline supply. Finally, as set forth in the 2015 Comments, EPA could 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.

We recognize that these ideas would require further and separate rulemaking, since they were not considered by EPA in the Proposed Rule. But if EPA will be responsible for resetting statutory levels due to its past and current action, it can mitigate the harm caused by limiting volumes of sugarcane ethanol by instituting revisions that actually encourage its import and use in the nation's fuel supply.

VIII. Conclusions

Brazil has proven to have the natural resources, technology and experience to respond to demand of advanced biofuels when there is predictability and stability for planning. UNICA understands that EPA now finds itself in a difficult position in the RFS2 program. Faced with several years of low volumes for some fuels, due in part to uncertainties and delays in finalizing annual volumes, and intense political pressure from all sides, EPA is searching for a way forward that could address the perceived limits of supply and demand, while pushing all parties toward meeting Congress' goals. But EPA needn't put itself in a position that it feels it has no option but to rewrite those goals before they can be achieved, and with the reset provision, potentially permanently. Such a response certainly does not help in ensuring the environment needed for long-term planning to achieve higher volumes.

EPA can stimulate the market for advanced biofuels by keeping as close to the statutory volume requirements as possible and taking measures to encourage the import and production of low lifecycle GHG emitting renewable fuels, rather than discouraging these fuels by lowering their demand. Doing so is the most effective way to fully effectuate the language and purpose of

⁵⁶ UNICA has data indicating the number is even higher, *see supra* p. 6 and n. 11.

the RFS2 and to support the President's goals in his Climate Action Plan and leadership, with Brazil and others, in an international effort to address climate change. UNICA, and its sugarcane ethanol member companies, stand ready to support EPA in its efforts to move forward. As previously stated, if EPA sends a strong signal in November 2016, Brazilian mills will be provided sufficient notice to ensure greater volumes are available for exports to the U.S. market from the 2017/2018 harvest.

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,



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