BRAZILIAN SUGARCANE INDUSTRY ASSOCIATION

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RE: 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 (June 10, 2015)

Docket No. EPA-HQ-OAR-2015-0111

To Whom It May Concern:

The Brazilian Sugarcane Industry Association ("UNICA") appreciates the opportunity to provide these comments on the proposed rule, entitled, "Renewable Fuel Standard Program: Standards for 2014, 2015 and 2016 and Biomass-Based Diesel Volume for 2017; Proposed Rule," 80 Fed. Reg. 33,100, published by the U.S. Environmental Protection Agency ("EPA") on June 10, 2015 ("Proposed Rule").

UNICA is the largest representative of Brazil's sugar, ethanol, and bioelectricity producers. Its members are responsible for more than 50 percent of Brazil's ethanol production and 60 percent of Brazil's sugar production. UNICA's priorities include serving as a source for credible scientific data about the competitiveness and sustainability 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 sugarcane ethanol with 25 percent of global production and 20 percent of world exports.[1] Despite these volumes, sugarcane ethanol production uses less than 1.5 percent of Brazil's arable land and reduces lifecycle greenhouse gas ("GHG") emissions by up to 90 percent on average, 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 over 15 percent of the country's total energy needs.

[1] LMC International - Ethanol Market Report Data – Q2 2015.

The industry is expanding 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 continued success of the RFS2 program. UNICA recognizes the difficult position EPA now finds itself with regard to the RFS2 program, given the lower than expected volumes of advanced biofuels in the last few years. However, UNICA has concerns with EPA's proposed significant reductions of the 2015 and 2016 statutory volume requirements for advanced biofuels and total renewable fuels. UNICA's concerns are based on several issues. First, lowering the statutory volumes by these amounts is not supported by the statue nor necessary, at least in 2016, when Brazil could have the capacity to export higher volumes of advanced biofuels, under the right market conditions. We believe EPA understates the ability of Brazilian imports to assist in implementation. EPA also lacks a proper rationale to lower the advanced biofuels and total renewable fuels volumes in the manner and amount it proposes. Further, EPA's proposed reductions do not support Congressional intent and jeopardize progress toward increased use of low lifecycle GHG emission fuels. EPA's Proposed Rule also does not support the President's Climate Action Plan nor the most recent announced bilateral agreement on climate between the United States and Brazil.

Nevertheless, if EPA continues to assert it has authority and reasonable justification to lower the statutory volumes for these fuels as it proposes, it should do so only to the absolute minimum. To this end, UNICA supports efforts to increase the annual volumes for these fuels and believes they should not be lowered any further in 2015, 2016 or beyond. Indeed, in view of statutory reset provisions, EPA should not reduce volume requirements for advanced biofuels or total renewable fuels below 20 percent in 2015 and 2016. Finally, EPA should consider changing Equivalence Values ("EVs") for low lifecycle GHG emission fuels like sugarcane ethanol to spur further growth in advanced biofuels to help obligated parties meet statutory volume requirements.

These comments, which build on UNICA's prior comments on the RFS2 program, and in particular comments filed on January 28, 2014 with regard to EPA's initial proposal to reduce 2014 volumes,[2] are intended to provide updated information regarding Brazilian sugarcane

[2] UNICA, Submission of Comments: Proposed 2014 Standards for Renewable Fuel Standard

ethanol production and to express UNICA's continued concerns with EPA's proposed reductions in statutorily-specified volume requirements for advanced biofuels and total renewable fuels. Specifically, these comments will:

1. Describe UNICA's past participation in EPA's RFS2 rulemakings;

2. Briefly summarize recent scientific literature addressing the lifecycle GHG benefits of Brazilian sugarcane ethanol as compared to fossil fuels and other biofuels;

3. Explain why Brazil remains fully capable of helping obligated parties to achieve higher volumes of advanced biofuel and total renewable fuels than EPA estimates;

4. Explain why reducing statutory volume requirements for advanced biofuels and total renewable fuels through waiver provisions in the amounts EPA proposes is not necessary or supported under the Clean Air Act ("CAA");

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 the recently announced U.S.-Brazil bilateral climate initiative;

6. In the event EPA nevertheless goes ahead with its proposal, provide support for EPA raising volumes in 2015, 2016 and thereafter, rather than potentially setting up a statutory re-set in 2017; and

7. Reiterate why EPA should reconsider the EVs for renewable fuels it first established in RFS1, and why it should now give weight to GHG lifecycle emissions as well as energy content of renewable fuels when assessing these EVs.

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

I. UNICA is an active partner in EPA's 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 CAA. Ever since Congress passed the EISA, UNICA has represented Brazil's sugarcane biofuel industry in matters regarding the RFS2

Program, 78 Fed. Reg. 71,732 (Nov. 29, 2013), Docket No. EPA-HQ-OAR-2013-0479 (Jan. 28, 2014) (attached).

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. 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, aimed at meeting domestic and foreign demand, including U.S. demands for renewable fuels. Preliminary figures for 2015/2016 show some 7.8 billion gallons produced. *See* Table 5 and Graph 4 (attached).

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 ethanol 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.

First, UNICA submitted extensive comments on EPA's proposed RFS2 rulemaking in 2009.[3] In those comments, UNICA provided a detailed overview of sugarcane ethanol production in Brazil and its role as a renewable energy source. UNICA also provided extensive lifecycle analysis data to EPA, demonstrating that Brazilian sugarcane ethanol qualifies as an advanced biofuel under the EISA. Finally, UNICA offered a series of detailed suggestions for how EPA could modify the proposed RFS2 rule to account for unique aspects of the sugarcane industry. In response to UNICA's comments, EPA made adjustments to the lifecycle analysis for Brazilian sugarcane ethanol and appropriately concluded that GHG emissions reductions exceeded the GHG reduction threshold to qualify as an advanced biofuel.

[3] 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").

Second, 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. In its comments on those rulemakings, UNICA provided assurances, based on its role as the primary representative of the Brazilian sugarcane ethanol industry, that if the market signals are right, sufficient quantities of Brazilian sugarcane ethanol would 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 disincentivize imports. UNICA also helped EPA monitor Brazilian exports and imports of ethanol, and provided EPA with perspectives on how changes to U.S. laws and regulations, such as the expiration of the Volumetric Ethanol Excise Tax Credit, could affect Brazilian sugarcane ethanol exports to the United States.

Further, UNICA has offered its expertise and experience with respect to other issues related to renewable fuels. For example, in response to petitions seeking to increase the allowable ethanol content in gasoline to 15 percent, UNICA provided detailed comments describing its significant expertise in ethanol blends and Brazil's extensive experience and success in using ethanol blends that exceed 10 percent.[4] These comments were intended in part to demonstrate that it is technically and economically feasible for EPA to raise the allowable ethanol content in gasoline to achieve Congress' goals as expressed in the EISA. UNICA remains ready to assist EPA as it considers policy options that may be available to address the alleged "E10 blendwall" issue without conflicting with Congress' mandate to increase the volume of renewable fuels used in the United States.

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 would dramatically limit the availability of sugarcane ethanol exports to the United States.[5] UNICA further explained why such an expansion to producers that do not generate RINs is inconsistent with the EISA, unnecessary to ensure compliance with the RFS2

[4] 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).
[5] 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).

program, and likely inconsistent with international trade obligations under the World Trade Organization. UNICA's concern was that the expansion of the regulation and its proposed effective date would bring a halt to Brazilian sugarcane ethanol imports into the United States.

This threat to sugarcane imports and to the integrity of the overall RFS2 program led UNICA to file comments in January 2014 with regard to EPA's initial proposal for 2014 volumes, a proposal EPA has since withdrawn. In comments which bear significant similarities to the instant comments, UNICA explained why EPA could not reduce the volume requirements for advanced biofuels and total renewable fuels as initially proposed, and why such reductions were neither consistent with the CAA nor the President's Climate Change Action Plan. UNICA also surveyed recent scientific literature addressing the full lifecycle GHG benefits of Brazilian sugarcane to demonstrate why continued imports should be encouraged, not prevented by unfortunate policy choices. Finally, UNICA explained why EPA should in fact recognize the GHG-reducing value of sugarcane ethanol and encourage further imports by reconsidering the EVs of renewable fuels, giving weight to GHG lifecycle emissions as well as energy content of renewable fuels.

In the instant rulemaking, EPA is once again proposing to reduce statutory volumes for advanced biofuels and total renewable fuels. As explained below, EPA's reductions are still not necessary nor consistent with the CAA, Congressional intent or the President's climate change program, and may lead to uncertainty and instability in long-term planning.

II. Sugarcane ethanol produces significant greenhouse gas benefits compared to fossil fuels and other biofuels.

UNICA herein incorporates its discussion in its January 2014 comments concerning the significant GHG benefits of sugarcane ethanol as compared to other fuels, including other biofuels, and attaches those comments to the instant comments for EPA's continued consideration. In brief, lifecycle analyses from around the world have repeatedly shown that, compared to the 2005 gasoline baseline, Brazilian sugarcane ethanol provides GHG benefits that meet or exceed the emissions reduction threshold for cellulosic biofuels.[6] In fact, these lifecycle analyses formed the basis for EPA's approval of Brazilian sugarcane ethanol as an advanced

[6] *E.g.*, 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.

biofuel in the final RFS2 Rule.[7] More recent studies, published after the RFS2 Rule, continue to support EPA's conclusions regarding the GHG benefits of sugarcane ethanol.[8]

As our prior comments show, sugarcane remains the world's most efficient feedstock produced at a commercial scale,[9] and one of its greatest benefits is its low GHG emissions rate relative to other fuels.[10] Traditional lifecycle analysis has shown that sugarcane ethanol, as currently produced in Brazil, reduces GHG emissions by up to 90 percent when compared to traditional gasoline.[11] Recently introduced production techniques and developing technologies promise to further reduce emissions, to the point that sugarcane ethanol and its byproducts may be GHG-negative in the foreseeable future.[12]

Our January 2014 comments further elaborate on the several factors which explain how sugarcane ethanol reduces GHG emissions and cite recent peer-reviewed studies showing how Brazil's use of sugarcane ethanol as a transportation fuel for 40 years has led to significant net reduction of carbon dioxide ("CO_2") emissions and is projected to reduce substantially more in the next two decades. The prior comments also document how use of materials produced from sugar processing, bagasse and foliage, are now being use to surplus electricity, which is then fed into Brazil's electrical grid, replacing carbon-intense forms of electricity, like electricity from

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[7] Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program, 75 Fed. Reg. 14,670 (Mar. 26, 2010).

[8] J.E.A. Seabra et al., *Life cycle assessment of Brazilian sugarcane products: GHG emissions and energy use*, BIOFUELS, BIOPRODUCTS, AND BIOREFINING 5 (2011): 519-532; D. Khatiwada, J. Seabra, S. Silveira, & W. Arnaldo *Accounting greenhouse gas emissions in the lifecycle of Brazilian sugarcane bioethanol: Methodological references in European and American regulations*, ENERGY POLICY 47(C) (2012): 384-397. J.E.A. Seabra & I.C. Macedo, *Comparative analysis for power generation and ethanol production from sugarcane residual biomass in Brazil*, ENERGY POLICY 39(1) (2011): 421-428; S.P. Souza & J.E.A. Seabra, *Environmental benefits of the integrated production of ethanol and biodiesel*, APPLIED ENERGY (2012), *available at* http://dx.doi.org/10.1016/j.apenergy.2012.09.016; L.A.D. Paes & F.R. Marin, *Carbon storage in sugarcane fields of Brazilian South-Central region*, CENTRO DE TECNOLOGIA CANAVIEIRA [CENTER FOR SUGARCANE TECHNOLOGY]. TECHNICAL REPORT (Piacicaba, Sao Paulo, 2011), *available at* http://www.unica.com.br/download.php?idSecao=17&id=16900437; A.C. Joaquim, F.C. Bertolani, J.L. Donzelli, & R.M. Boddey, *Organic Carbon Stocks in Soils Planted to Sugarcane in the Mid-South Region of Brazil: A Summary of CTC's Data, 1990-2009*, CENTRO DE TECNOLOGIA CANAVIEIRA [CENTER FOR SUGARCANE TECHNOLOGY], TECHNICAL REPORT (Piracicaba, Sao Paulo, 2011), *available at* http://www.unica.com.br/download.php?idSecao=17&id=18105453.

[9] *See* Jose Goldemberg et al., *Ethanol for a Sustainable Energy Future*, SCIENCE 315:808 (2007): 809.

[10] M. Wang & M. Wu, *Life-cycle energy use and greenhouse gas emission implications of Brazilian sugarcane ethanol simulated with the GREET model,* INT'L SUGAR J. 110.1317 (2008): 527-45.

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

[12] *See, e.g.,* I. Macedo, & J. Seabra, *Mitigation of GHG emissions using sugarcane bio-ethanol*, at 109, *available at* http://sugarcane.org/resource-library/studies/Wageningen%20-%20Chapter%204.pdf.

thermoelectric plants. Such improvements, along with new investments in transmission grids and high-pressure boilers, promise considerable expansion of the sugarcane bioelectricity industry, to the point that sugarcane electricity could supply over 20 percent of Brazil's electricity by 2023, as opposed to the roughly three percent it currently supplies, obviating the need for new thermal power plants and the fossil fuels they consume.[13]

Study after study confirms 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.[14] 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 the United States' announced commitment for international negotiations at the United Nations Framework Convention on Climate Change ("UNFCCC") in Paris in December 2015. The importance of Brazilian sugarcane ethanol was recently underscored in the June 30, 2015 U.S.-Brazil Joint Statement on Climate Change, where Brazil stated its intentions to increase its use of renewable resources, including electricity and biofuels, to a share of 28-33 percent by 2030. The two countries also agreed to increase their share of renewables in their respective electricity generation mixes to the level of 20 percent by 2030.[15] In the Joint Communique issued by President Obama and President Rousseff, among other things, the Presidents endorsed cooperation in the "priority areas" of biofuels, oil and natural gas, renewable energy, energy efficiency, civil nuclear energy, and energy related sciences. The Presidents also underscored "the importance of enhancing the levels of clean and renewable energy in their respective energy

[13] *See* January 2014 Comments at 4-6.

[14] One recent study shows that sugarcane ethanol's energy yield ratio—which relates the energy output of sugarcane ethanol to the fossil energy input used in its production—is 4 to 6 times greater than the energy yield ratio of most conventional biofuels. Costanza Valdes Economic Research Service of the United States Department of Agriculture, *Brazil's Ethanol Industry: Looking Forward*, at 2 (USDA 2011), *available at* http://www.ers.usda.gov/media/126865/bio02.pdf. *See also* Christine Crago et al., *Competitiveness of Brazilian Sugarcane Ethanol Compared to US Corn Ethanol* (prepared for presentation at Agricultural & Applied Economics Association 2010 AAEA, CAES, & WAEA Joint Annual Meeting), at 18 (calculating lifecycle GHG benefits from sugarcane ethanol to be more than twice as great as lifecycle GHG benefits from conventional ethanol), *available at* http://ageconsearch.umn.edu/bitstream/60895/2/Crago_CostofCornandSugarcaneEthanol_AAEA.pdf.

[15] U.S.-Brazil Joint Statement on Climate Change, the White House (June 30, 2015), available at https://www.whitehouse.gov/the-press-office/2015/06/30/us-brazil-joint-statement-climate-change.

mixes and improving efficiency." Finally, they "recognized the role that biofuels can play in reducing greenhouse gas emissions."[16]

These most recent statements by the U.S. and Brazilian Heads of State are not mere words. They were issued to show the international community both leadership and commitment to ensuring GHG reductions now and in the future. Yet EPA's Proposed Rule immediately threatens the integrity of these commitments. Consistent with Congress' purpose in the EISA and the President's goals in his Climate Action Plan, international strategy and bilateral agreement with Brazil, EPA should avoid taking steps—such as those proposed in the 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.

III. Brazil has the capacity to help the United States achieve higher volumes of advanced biofuel.

As discussed above, Brazilian sugarcane ethanol has played a key role in the implementation of the RFS2 program. EPA considers sugarcane ethanol an advanced biofuel, and imports of such advanced biofuels have helped obligated parties in the United States to meet statutory obligations for advanced biofuel and total renewable fuel requirements. From 2012-2014 sugarcane ethanol corresponded to 13 percent of all advanced fuels consumed by Americans in the United States.[17] Like any other agricultural commodity, Brazilian sugarcane ethanol exports are based on market 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 statutory volumes of the RFS2 as they were enacted into law. EPA controls this aspect of the market, and Brazilian sugarcane can continue to play an important role for the foreseeable future unless EPA unnecessarily limits the volumes or otherwise creates further market uncertainty or disincentives to the industry.

1. Brazil exports substantial volumes of sugarcane ethanol into the United States.

The United States has long been an important market for sugarcane ethanol exports from Brazil. Based on data beginning in 2000, *see* Table 3 and Graph 1 attached, exports to the

[16] Joint Communique by President Barack Obama and President Dilma Rousseff, the White House, at 3 (June 30, 2015), *available at* https://www.whitehouse.gov/the-press-office/2015/06/30/joint-communique-president-barack-obama-and-president-dilma-rousseff.
[17] UNICA, "Policy Overview," *available at* http://sugarcane.org/global-policies/policies-in-the-united-states/us-biofuel-policy/rfs/policy-overview.

United States were modest from 2000-2003, with a high of 11.759 million gallons in 2003. Beginning in 2004, volumes picked up significantly, ranging from a low of 68.843 million gallons in 2005 to a high of 462.142 million gallons in 2006. Volumes dropped sharply during the world financial crisis in 2009-2010, but began to move upward after 2011, when the tariff on sugarcane ethanol was removed. Since then, volumes have fluctuated between a low of 173.286 million gallons in 2011 and a high of 541.254 million gallons in 2012. These volumes were high, despite the significant market uncertainty regarding the RFS2 program and potential changes in statutory volumes. For a number of those years, Brazil maintained comparable volumes of imports into Europe, further indicating plentiful supply with shipments based on prevailing market conditions. See Table 4 and Graphs 2 and 3, attached.

EPA opines in the Proposed Rule that Brazil cannot supply the 3-4.7 billion gallons in advanced biofuels it calculates would be required between 2015 and 2016 under the RFS2 statutory volumes, and that Brazil would be unlikely to reach such figures when its highest level of exports to the United States was 680 million gallons in 2006 and only 64 million gallons in 2014.[18] As shown above and in Table 4, EPA's figures do not match the figures of the Brazilian Ministry of Industry and Commerce's Secretariat of Foreign Trade ("SECEX"). Indeed, imports in 2012 from Brazil to the United States were a historical record high. The 2014 volumes exported from Brazil, which were actually 190.021 million gallons, are understandably lower because it was during this period that EPA proposed drastically reducing statutory volumes under the RFS2, including for advanced biofuel. This uncertainty lowered demand and consequently reduced exports to the United States.[19] EPA notes that the low imports of sugarcane ethanol in 2014 are the primary reason that advanced biofuel volumes in 2014 were below 2013, but takes no responsibility for creating the climate of uncertainty that depressed the market in the first place.[20]

In an event, preliminary figures for 2015/2016 indicate volumes of sugarcane ethanol are still increasing, despite the difficulties the sector has encountered in the recent years. *See* Table 5 and Graph 4 (attached). More important, Brazil has the capability to ramp up quickly and provide significant volumes in the future where EPA does not eliminate this incentive to do so.

[18] 80 Fed. Reg. at 33,116, 33122; *see also id*. at 33,109 (alleging general limitations on import capabilities without any further detail).
[19] Brazil exported 190 million gallons of sugarcane ethanol in 2014, but EPA is correct that only about 64 million gallons were used in the United States for transportation fuel, and generated RINs. 130 million gallons were used to produce ethyl tert-butyl ether ("ETBE") and exported to Japan. However, given the right market conditions, including clearly established higher volumes, more of this exported volume could have gone to the United States for use as transportation fuel. EPA's explanation suggests incorrectly that Brazil only had the capacity to export 64 million gallons to the United States in 2014.
[20] *Id*. at 33,122, 33,124 n.64.

According to Brazil's National Agency of Petroleum, Natural Gas and Biofuels (ANP) the installed capacity for anhydrous and hydrous ethanol production are 108.67 million and 205.68 million liters per day (more than 5 billion gallons and 10 billion gallons per year, respectively).[21] If we look at the most recent harvest season, Brazil produced 3.3 billion gallons and 4.6 billion gallons, respectively of anhydrous and hydrous ethanol. *See* Table 5 (attached) The numbers regarding ethanol productive capacity were based on the 383 producing mills listed by the ANP, and it shows that installed capacity is superior than the actual production, so in case of a higher demand for ethanol, Brazil is able to quickly respond to the market. In fact, under the right market conditions, including more robust volumetric requirements, Brazil can have the capacity to produce an estimated 2 billion gallons of sugarcane ethanol available for export to the United States in 2016. Such volumes are not currently available because Brazil is in the middle of its harvest and, with EPA's delays in setting volumes and other factors, producers did not have the appropriate market signals to produce increased volumes for export.[22]

2. Domestic regulations will not limit Brazil's export capacity.

Brazil has fully integrated sugarcane ethanol into its transportation fuel mix, replacing 40 percent of its gasoline needs with ethanol.[23] It has done so without significant impact to its ability to export high volumes of sugarcane ethanol. EPA is correct that Brazil recently raised the blend of ethanol in its gasoline from 25 percent to 27 percent (but not 27.5 percent as incorrectly stated later by EPA).[24] While the two percent increase in blending is significant, we do not expect this to have a significant impact on compliance or on volumes available for export. Again, exports follow market conditions, and the RFS2 statutory volumes are a key part of those conditions. Indeed, the Brazilian government instituted the higher blend as an economic incentive for ethanol producers due to an existing overstock of ethanol.

Even if Brazil faced a negative harvest season and thus lower volumes of sugarcane ethanol, the sector's export commitments would not be expected to suffer, given the flexibility of the hydrous ethanol market in Brazil. About 65 percent of the Brazilian fleet is composed of flexible fuel vehicles ("FFVs"), and drivers can run on E25 in stead of E100, allowing part of the hydrous ethanol production to be dehydrated in order to fulfill export contracts. This flexibility

[21] Data published in September 2014 in Agéncia Nacional do Petróleo, Gás Natural e Biocombustíveis, Boletim do Etanol, *available at* http://bit.ly/1vWVP6v (last updated July 7, 2015).
[22] ANP Ethanol Bulletin #4 June 2015, *available at* http://bit.ly/1vWVP6v (last updated July 7, 2015). In addition to sugarcane ethanol, there are three cellulosic ethanol plants in initial stages of operation in Brazil Grandbio, Raizen (that was recently inaugurated) and CTC/Sao Manuel, with a combined capacity of production of about 32 million gallons of cellulosic ethanol.

[23] UNICA, "The Brazilian Experience," available at http://sugarcane.org/the-brazilian-experience.
[24] *See* 80 Fed. Reg. 33,116; but *see id* n. 24

acts like an insurance policy for the industry to produce either hydrous or anhydrous ethanol, directed to either domestic or international markets, depending on their relative prices. Table 5 and Graph 4, attached, show significant volumes of hydrous ethanol available for any such conversions over the last several years. Moreover, Brazil has an ample pool of resources on which to rely. By way of example, in 2013, Brazil produced 7.3 billion gallons of ethanol, of which 767 million gallons were exported, and 432 million gallons went to the U.S. The volumes available increased in 2014, even though the exports to the United States did not, for reasons described above. *See* Table 5 and Graphs 1 & 4, attached. Ethanol production increased again in 2015. *See* Table 5, attached.

The sugarcane ethanol sector in Brazil has demonstrated an enormous dynamism for new investments, provided the market opportunities exit, and an ability to quickly respond to those opportunities. The introduction of FFVs in 2003 and the prospects of exports increase generated a significant wave of investments in greenfield investment, with the construction of almost 110 new mills, out of around 400 industrial plants in the whole country, all in a period of six years (2005/2006 to 2010/2011). For these investments to take place, the production of sugarcane more than doubled in less than one decade, and the production of ethanol increased 158 percent in this period, demonstrating the capacity of the sector to expand its production. Indeed, as stated above, the installed capacity is superior to the actual production, so where there is a higher demand for ethanol, Brazil can quickly respond to the market.

3. Large volumes of sugarcane imports are expected for California's Low Carbon Fuel Standard.

The California Low Carbon Fuel Standard ("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. 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 law 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.

Early on in its implementation, CARB believed that sugarcane ethanol would likely play a "key compliance role" in the LCFS.[25] In 2014, CARB staff projected that the United States would import between 850 million gallons and 1.75 billion gallons of sugar cane ethanol

[25] 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

annually by 2020.[26] Under the LCFS, California rates sugarcane ethanol as the best-performing low-carbon fuel on the market today.[27] Indeed, sugarcane ethanol is among the principle commercial-scale ethanol fuels capable of meeting the LCFS's lifecycle GHG emissions requirements.[28] For this reason, sugarcane ethanol should continue to be a major renewable fuel source in California, which imported 90 million gallons of sugarcane ethanol in 2012 alone.[29]

UNICA, in comments to CARB regarding the availability of sugarcane for the LCFS, stated it "firmly anticipates that Brazil" would have that amount available to the U.S. markets by 2020.[30] There is no reason that biofuels imported to meet the LCFS should also not count for compliance with the relevant RFS2 category, so every gallon of sugarcane ethanol imported into California for blending into qualifying transportation fuel should count toward the advanced biofuel and total renewable fuel requirements under RFS2 as well. Hence, EPA should look to CARB for a more realistic assessment of what sugarcane ethanol imports could be.

4. Brazilian sugarcane will play an important role in the future of RFS2.

With increasing capacity to export sugarcane ethanol, Brazil can continue to play an as 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 proposed 2.9 billion gallon advanced biofuel

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[26] CARB, Air Resources Board, Low Carbon Fuel Standard Re-Adoption, Fuel Availability (Sept. 25, 2014), *available at* http://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/092514_lcfs_fuels_availability_presenation_color.pdf

[27] *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.").

[28] Yeh & Witcover, supra note 27 at 4 (sugarcane ethanol is the second most consumed biofuel under the LCFS).

[29] 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.

[30] UNICA, Comments on Brazilian Sugarcane Ethanol Availability for the LCFS (Oct. 16, 2014)

requirement for 2015 can be met with higher volumes of domestic and imported advanced biofuels, including sugarcane ethanol.[31] UNICA believes this volume can and should be even higher. Further, UNICA supports EPA's view that the 2016 proposed volume requirements for advanced biofuel and total renewable fuels can be met with varying amounts of imported sugarcane ethanol, but could be higher than 433 million gallons.[32] Again, however, UNICA believes that proposed 2016 volumes should be higher. Moreover, EPA even uses scenarios regarding costs of compliance with 2015 and 2016 advanced biofuel standards where the entire increase proposed by EPA is met with sugarcane ethanol from Brazil.[33]

UNICA further urges EPA to consider raising the volumes of advanced biofuels and total renewable fuels to ensure that sugarcane ethanol can continue to play such an important role in fostering compliance. As will be discussed in more detail below,[34] currently, sugar cane ethanol-derived D-5 RINs compete with biodiesel D-4 RINs for these two fuel categories, and biodiesel has enjoyed a tax credit which does not exist for sugarcane ethanol as well as a higher EV. If EPA reduces the volumes for advanced biofuels and total renewable fuels by too great a volume, it may make it considerably more difficult for sugarcane ethanol to compete for those lower volumes, adversely impacting imports and the utility of sugarcane ethanol as a key piece of the RFS2 program. EPA should take this differential treatment into consideration.

5. Two-way trading does not create any issues for imports.

Some have argued in the past that increased sugarcane ethanol imports into the United States provide less of a GHG benefit than expected due to "fuel shuffling," a term used to describe the market phenomenon where Brazil exports sugarcane ethanol to the United States while the Unites States exports corn ethanol to Brazil. This argument asserts that two-way trading is inefficient and 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.[35]

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[31] 80 Fed. Reg. at 33122.
[32] *Id*. at 33,126-29 and Table II.D.2-2 (showing various scenarios illustrating possible compliance with proposed 2016 targets using varying amounts of sugarcane ethanol, including a scenario where 433 million gallon of sugarcane ethanol are used for compliance purposes).
[33] *Id*. at 33,130-31.
[34] *See infra* at Section IV.
[35] *See* Yeh, Witcover & Kessler, *supra* note 27 at 6-7.

Such two-way trade, however, should not be an issue of concern for EPA. First the issue is not germane to EPA's rulemaking process. 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 a advanced biofuel.[36] Further, emissions associated with the transportation of sugarcane ethanol to the United States constitute an insignificant portion of total lifecycle GHG emissions.[37] 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 corn ethanol.

IV. Reducing statutory volumes to the extent EPA proposes is not supported in the law.

In its January 2104 comments on EPA's initial proposed volumes for 2014, UNICA set forth in great detail its arguments for why reductions of the statutory volumes for advanced fuel and total renewable fuels were not consistent with the CAA's waiver provisions. EPA, in its Proposed Rule, once again plans to combine its waiver authorities, albeit with slightly refined arguments which mainly focus on assertions of "inadequate domestic supply." UNICA does not believe such assertions are correct nor do they support reductions of advanced biofuels and total

[36] *See, e.g.,* CARB, "Detailed California-Modified GREET Pathways for Brazilian Sugarcane Ethanol; Average Brazilian Sugarcane Ethanol, With Mechanized Harvesting and Electricity Co-product Credit, With Electricity Co-product Credit," (Sept. 23, 2009, V. 2.3), *available at* http://www.arb.ca.gov/fuels/lcfs/092309lcfs_cane_etoh.pdf.

[37] CARB concluded that total emissions associated with the transport and distribution of Brazilian sugarcane ethanol to California were only 1.9% of lifecycle emissions. CARB , Detailed California-Modified GREET Pathways for Brazilian Sugarcane Ethanol: Average Brazilian Ethanol, With Mechanized Harvesting and Electricity Co-product Credit, With Electricity Co-product Credit version 2 (2009), available at http://www.arb.ca.gov/fuels/lcfs/092309lcfs_cane_etoh.pdf.

renewable fuels well below the amounts EPA proposes for cellulosic ethanol. For these reasons, EPA should not make the significant reductions of these fuels it now proposes for 2015 and 2016.[38]

1. Reductions under the cellulosic waiver are not supported.

EPA proposes 2015 reductions of advanced biofuels of 2.60 billion gallons and total renewable fuel of 4.20 billion gallons, and 2016 reductions of advanced biofuels of 3.85 billion gallons and total renewable fuels of 4.85 billion gallons. By contrast, EPA proposes to reduce the 2015 volumes of cellulosic biofuel by 2.89 billion gallons and 2016 volumes by 4.04 billion gallons.[39] EPA justifies these significant reductions on a combination of its waiver authority for cellulosic biofuel, section 211(o)(7)(D)(i),[40] and its "general" waiver authority under section 211(o)(7)(A).[41] More specifically, for each provision, EPA asserts there is inadequate domestic supply to support statutory volumes of advanced biofuels and total renewable fuels.

As an initial matter, section 211(o)(7)(D)(i) does not give EPA completely unfettered discretion to reduce cellulosic ethanol, advanced biofuel or total renewable fuels. 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*. EPA projected volumes of cellulosic biofuels of 108 million gallons in 2015 and 206 million gallons in 2016. 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 2015 below its reduction of 2.89 billion gallons of cellulosic biofuel and in 2016 by 4.04 billion gallons of cellulosic biofuels. EPA's proposed reductions in volumes for advanced biofuels and total renewable fuels exceeds these limits.[42]

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[38] UNICA's concerns would also apply to the proposed 2014 volumes. However, that issue is now likely moot due to the passage of time. UNICA notes, though, that the proposed 2014 volumes for advanced biofuels and total renewable fuels are only slightly higher than those which it challenged in its 2014 comments, and many of the same arguments it made still apply to the current Proposed Rule. Moreover, the low actual volumes reported in 2014 were, at least in some part, a result of the significant uncertainty that surrounded the RFS2 program, given EPA's delay in timely finalization of annual volumes.
[39] 80 Fed. Reg. at 33103-105, Tables I.A-1 & I.A-3.
[40] 42 U.S.C. § 7545(o)(7)(D)(i).
[41] 42 U.S.C. § 7545(o)(7)(A).
[42] For purposes of these comments, UNICA is assuming EPA has properly calculated the cellulosic biofuel production numbers in 2014 and properly estimated reasonable production figures for 2015 and 2016, but does not waive the argument that these figures should be higher.

Moreover, 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 is insufficient volumes of advanced biofuels or total renewable fuels to make up the difference*. But Congress again demonstrated its preferred that EPA first try to meet any shortfalls first with other advanced biofuels. Otherwise, it would have required EPA to reduce volume requirements instead of permitting it to do so. Indeed, EPA has addressed similar shortages of cellulosic biofuels in past rulemakings by making up volumes through advanced biofuels.[43]

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 efforts to calculate exactly how much sugarcane ethanol might be needed and available to support a lower reduction under section 211(o)(7)(D)(i); it just assumed the maximum reduction in advanced biofuels and total renewable fuels possible under the provision, implying there were no such volumes of those fuels available to make up the shortfall. As indicated above, EPA's assumptions about the availability of sugarcane ethanol imports are incorrect. Brazil has the installed capacity to make available 2 billion gallons of advanced biofuels for exports in 2016 if EPA helps drive the market with higher volume requirements than it now proposes.

Moreover, section 211(o)(7)(D)(i) does not require that reductions in advanced biofuels necessarily entail commensurate reductions in total renewable fuels. EPA still has an obligation to determine whether other renewable fuels can make up the shortfall in cellulosic biofuels and other advanced biofuels. Hence, EPA could propose volume reductions for advanced biofuels that are greater than proposed for total renewable fuels. Further, any justified "pass through" of

[43] *See, e.g.*, "Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards, Proposed Rule," 78 Fed. Reg. 9,282, 9,295-9,303 (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.").

reductions in advanced biofuels should not be double counted in reductions of total renewable fuels. At most, the reduction in volume requirements of cellulosic biofuels, here 2.89 billion gallons in 2015 and 4.04 billion gallons in 2016, can, if properly justified, be used to reduce the volume requirements of both advanced biofuels and total renewable fuels only up to those same amounts for each fuel.

EPA asserts that its volume reductions under section 211(o)(7)(D)(i) are justified by an inadequate supply of advanced biofuels, including the "legal and practical constraints on their supply to vehicles and other qualifying uses…."[44] UNICA agrees that this section does give EPA significant discretion to determine the amounts it can reduce advanced biofuels and total renewable fuels, but only up to the amount it has reduced cellulosic biofuels. But once EPA has presented its justification -- here, an inadequate supply of advanced biofuels -- EPA must make a reasonable showing that there exists an inadequate supply.[45] As discussed above, EPA has simply assumed there would not be an adequate supply available for import without really determining how much sugarcane ethanol imports might be available to make up shortfalls in advanced biofuel volume requirements. As discussed below with regard to the general waiver authority, EPA does not meet this burden by relying on constraints in demand, rather than supply.[46]

Finally, EPA has not adequately shown it can augment its authority under section 211(o)(7)(D)(i) simply by "supplementing" its proposed reductions through the general waiver provision of section 211(o)(7)(A). The two provisions make no reference to each other and are located in different sections of the RFS2 statutory provisions. EPA's interpretation would give it authority to override the express limitations in section 211(o)(7)(D)(i) simply by asserting, as it does now, that more decreases in volume are needed than allowed in the cellulosic waiver provision. It presents no legal authority for why it can ignore such clear legislative intent to limit reductions.[47] Indeed, an unnecessarily large reduction in low lifecycle GHG emission advanced

[44] 80 Fed. Reg. at 33,104 nn. 12, *id*. at 33,110
[45] 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." 80 Fed. Reg. at 33,110.
[46] *See* infra Section 2.
[47] *See UARG v. EPA,* 134 S. Ct. 2427, 573 U.S. __ (2015) (reversing EPA's interpretation of provision in CAA as justifying the Agency's rewriting of statutory emission thresholds*); Chevron, U.S.A. Inc. v. Natural Res. Defense Council*, 467 U.S. 837, 842-43 (1984) (where, after "employing traditional tools of statutory construction," it is evident that "Congress has directly spoken to the precise question at issue," the statute is unambiguous and an agency must abide by its clear meaning).

biofuel volume requirements would be inconsistent with the clear intent of Congress to promote the production of clean renewable fuels.[48]

2. Reductions under the general waiver are not supported.

Because EPA cannot fully justify the full amount of its proposed reductions in volume requirements of advanced biofuels and total renewable fuels under the cellulosic biofuels waiver provision, it asserts, without clear legislative authority, that it can combine that waiver with its general waiver authority under section 211(o)(7)(A) to make reductions below those allowed by the cellulosic waiver. Notably, most of EPA's discussion on general waiver pertains to reductions in total renewable fuels, not advanced biofuels, but we will assume for these comments that EPA meant its arguments to apply to both sets of fuels. In any event, neither application is warranted here. 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. Section 211(o)7)(A) allows EPA to reduce statutory volume requirements for renewable fuels in only two circumstances: first, EPA may reduce the volume requirements if it determines "that implementation of the requirement would severely harm the economy or environment of a State, a region, or the United States"; second, EPA may reduce the volume requirements if it determines "that there is an inadequate domestic supply of renewable fuel." EPA seeks to base its use of the general waiver authority for total renewable fuels solely on the second criteria,[49] an alleged "inadequate domestic supply" of renewable fuels.[50]

EPA's interpretation is both exceedingly broad and novel. EPA admits it has had limited occasion to interpret this standard and has never before used it in the context of deriving an appropriate annual standard.[51] EPA's finding of inadequate supply is itself based on a "full range of constraints that could result in an inadequate supply of renewable fuel to the ultimate consumers, including fuel infrastructure and other constraints." EPA includes such factors as "the ability to produce or import qualifying renewable fuels as well as factors affecting the

[48] *See Energy Independence and Security Act of 2007*, Pub. L. No. 110-140, 121 Stat. 1492 (purpose includes "increas[ing] the production of clean renewable fuels); 74 Fed. Reg. 24,904, 25,021 (May 26, 2009) (explaining that the RFS2 Rule's requirements "are designed to ensure significant GHG emissions reductions from the use of renewable fuels and encourage the use of GHG-reducing renewable fuels.")
[49] Since EPA expressly did not make a finding that implementation of the RFS2 volumes would severely harm the economy or environment of a State, a region or the United States, there is no need to comment on this aspect. UNICA would note, however, that maximizing imports of low lifecycle GHG advanced biofuels such as sugarcane ethanol, would create real environmental benefit as compared to conventional fuels and higher GHG emitting renewable fuels.
[50] 80 Fed. Reg. at 33,111.
[51] *Id.*

ability to distribute, blend, dispense, and consume those renewable fuels in vehicles." [52] There are several problems with this interpretation. First, EPA's claim that there is an inadequate supply of advanced biofuels and total renewable fuels is predicated in significant part on a perceived lack of imports of sugarcane ethanol.[53] As shown above, EPA has not really analyzed how much sugarcane ethanol might be available for import, particularly if the disincentives of low statutory volume requirements are removed. Brazil has the capacity to export significant amounts of sugarcane ethanol, up to 2 billion gallons in 2016 if the market incentives are present.

Further, the problem EPA seeks to address in the Proposed Rule is not one of inadequate domestic supply of renewable fuels but rather one of perceived inadequate demand. EPA's argument appears to be that adhering to the RFS2's requirements would lead to generation of more renewable fuel than refiners and some automakers might desire or be able to handle. In fact, EPA quite clearly states that "there is no shortage of ethanol and other types of renewable fuel that could be used to satisfy the statutory applicable volume of total renewable fuel…"[54] In other words, EPA believes the RFS2 would lead to "inadequate domestic supply" because some obligated parties might not want or be able to use all of the renewable fuel mandated by the RFS2. But "supply" and "demand" are not synonymous; they are in fact inversely related.[55] Supply refers to the total amount of a specific good or service that is available to consumers.[56] Demand, by contrast, refers to a consumer's willingness or ability to purchase (or a market to absorb) a specific good at a specific price.[57] That inverse relationship belies the notion, apparently pressed by EPA, that supply and demand should be viewed as one and the same thing for purposes of section 211(o)(7)(A)(ii). The only question for EPA, in considering whether there is an adequate domestic supply of renewable fuel, is whether there is enough renewable fuel available to meet the RFS2's requirements. EPA acknowledges this concern, but gives it short shrift, arguing that the practical supply limitations it describes actually apply to demand as well.[58]

EPA contends that the term "inadequate domestic supply" "does not specify what factors are relevant to determining the adequacy of the supply," providing it with the discretion to

[52] *Id*.
[53] *Id*. at 33,116
[54] *Id*. at 33,113.
[55] *See, e.g.*, GREGORY MANKIW, PRINCIPLES OF ECONOMICS 77-78 (Dryden Press 1998).
[56] *Id*. at 1222 (defining "supply," for economic purposes, to mean "[t]he amount of a commodity available for meeting a demand or for purchase at a given price").
[57] *Id*. at 379 (defining "demand," for economic purposes, to mean "[t]he desire to possess something combined with the ability to purchase it," or "[t]he amount of a commodity that people are ready and able to buy at a given time for a given price").
[58] 80 Fed. Reg. at 33,114.

determine whether the adequacy of the supply of renewable fuel can reasonably be judged in terms of availability for use by all relevant parties, including the obligated parties, the blenders and the consumer.[59] But the term does come with further specification and clarification. It necessarily refers back to the term "renewable fuel," which is used in the same sentence to refer to the type of fuel for which waivers may be granted if there is "inadequate domestic supply." The Act defines "renewable fuel" as "fuel that is produced from renewable biomass and that is used to replace or reduce the quantity of fossil fuel present in a transportation fuel."[60] The term "transportation fuel" is separately defined; it is "fuel for use in motor vehicles, motor vehicle engines, nonroad vehicles, or nonroad engines (except for ocean-going vessels)."[61] What EPA proposes is to reduce the required volume of *renewable fuel* based on what, at most, might be characterized as limitations on the amount of *transportation fuel* in commerce. But the statute does not allow reductions in required renewable fuel volumes based on the supply of transportation fuel. It only permits reductions based on the supply of renewable fuel, which, as the definitions make clear, is separate and distinct from transportation fuel.

That "domestic supply," as used in section 211(o)(7)(A)(ii), cannot be read to encompass concerns like those EPA has raised regarding demand or distribution capacity is further confirmed by the text of other parts of the CAA, particularly section 211(m).[62] That section sets out requirements for supplying oxygenated fuels. Like section 211(o)(7)(A)(ii), it allows EPA to waive the volume requirements in certain circumstances. Unlike section 211(o)(7)(A)(ii), however, which speaks only of allowing reductions where there is "inadequate domestic supply," section 211(m)(3)(C)(i) expressly provides that EPA may waive the volume requirements for oxygenated fuels upon "finding that there is, or is likely to be, for any area, an inadequate domestic supply of, *or distribution capacity for*, oxygenated gasoline" meeting the statutory requirements.[63] Clearly, then, when Congress wanted to allow EPA to consider distribution capacity in determining whether to waive volumetric requirements of the CAA, it had no trouble expressly saying so.[64] If "domestic supply" had the meaning EPA gives it in the Proposed Rule,

[59] *Id*. at 33,111.
[60] 42 U.S.C. § 7545(o)(1)(J).
[61] *Id*. § 7545(o)(1)(L).
[62] 42 U.S.C. § 7545(m).
[63] *Id*. § 7545(m)(3)(c)(i) (emphasis added).
[64] *See Sebelius v. Cloer*, 133 S. Ct. 1886, 1894 (2013) ("We have long held that where Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.") (internal quotations omitted); *see also KP Permanent Make-Up, Inc. v. Lasting Impression I, Inc*., 543 U.S. 111, 118 (2004) (same point).

the reference to "distribution capacity" in section 211(m)(3)(C) would be superfluous.[65] But it is not superfluous because, as already noted, "domestic supply" is a concept distinct from demand or distribution capacity. EPA discusses this other provision in its Proposed Rule but remarkably concludes that it supports, rather than undercuts, its argument that section 211(o)(7)(A)(ii)'s more limited language is actually as comprehensive as the more explicit section 211(m)(3)(C). The Agency also argues that this provisions by itself does not outweigh the allegedly numerous CAA provisions that suggest the general waiver can be read broadly, but neither its analysis or examples are supportive.[66]

The EISA's legislative history further reinforces that conclusion. Before finally adopting the EISA, Congress had before it two versions of that bill authorizing EPA to waive section 211(o)(2)(B)'s volumetric requirements when there was "inadequate domestic supply *or distribution capacity to meet the requirement*[s]."[67] It rejected both. In other words, given multiple opportunities to expressly authorize the expansive waiver powers EPA now claims for itself, Congress repeatedly demurred, even as it granted EPA "distribution capacity" waiver authority in section 211(m)(3)(C). It would thus appear that Congress did not want section 211(o)(2)(B)'s volumetric requirements to depend on factors like distribution capacity. EPA does consider this history briefly in the Proposed Rule, but rather quickly and summarily dismisses it because it alleges the congressional intent is unclear.[68] With due respect, EPA owes a duty to consider this history a bit more carefully, considering its lowering of volume requirements clearly is inconsistent with the purpose of the law. It certainly posits no legislative history supporting its contrary view.

In section 211(o)(7)(A)(ii), Congress clearly directed EPA to limit its consideration to whether there is "inadequate domestic supply;" it conspicuously did not authorize EPA to consider "inadequate…distribution capacity," even though it had authorized such consideration in other parts of the same legislation. Given the EISA's overarching purpose to increase both the production and use of advanced biofuels and renewable fuels, which itself would require

[65] *See Powerex Corp. v. Reliant Energy Servs., Inc.*, 551 U.S. 224, 232 (2007) (invoking the "standard principle of statutory construction . . . that identical words and phrases within the same statute should normally be given the same meaning").
[66] For example, EPA asserts that the waiver language in section 211(c)(4)(c)(ii), 42 U.S.C. § 75453(c)(4)(c)(ii), supports EPA's broad interpretation of "supply" to include "demand." Yet EPA recognizes that this latter section provides an express clarification that fuel distribution is to be included in the waiver determination, which would actually support the view that failure to include such language means Congress did not intend distribution to be covered in the general waiver provision. 80 Fed. Reg. at 33,112, 33,114.
[67] H.R. 6, 110th Cong. (2007); S. 606, 110th Cong. (2007) (emphasis added).
[68] 80 Fed. Reg. at 33,113.

substantial expansion of the Nation's capacity to distribute such advanced fuels, it is not surprising that Congress specifically declined to include inadequate distribution capacity as a basis for waiving the specified volumetric requirements. Given this, EPA's construction of the phrase "inadequate domestic supply" to include considerations of distribution capacity does not provide a sound legal basis for reducing the required volume of total renewable fuel under the CAA.

Finally, the underlying basis for EPA's concern with regard to distribution capacity, the alleged "E10 blendwall," does not justify derogating from Congressional intent and reducing statutory volumes of advanced biofuels and total renewable fuels. The blendwall 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 Nation's fuel supply, due, among other things, to a lack of infrastructure to deliver higher blends to consumers and to the limitations of older vehicles and their warranties. Whether this is an actual constraint or not, it is a problem that can be solved by those asserting the limitations, a point acknowledged by EPA.[69] EPA has already approved higher blends for use in newer and flex fuel motor vehicles, including E15 and E85, so it is not a matter of there being no alternatives.[70] The fact that the market may not have driven changes in fuel use to date is not a reason for EPA to acquiesce to lower volumes going forward than Congress established. The RFS2 program is supposed to be technology-forcing. It was not intended simply to capture the demands or distribution capacities of existing markets but to force the market to incorporate new technologies and means of distribution to meet the volumetric requirements set out in the CAA.[71] EPA itself recognizes this, since its 2016 volumes apparently would push the Nation's ethanol blend past the 10 percent mark.

Brazil can offer a powerful example of how government policies and the market can interact to promote advanced biofuels and the technologies and infrastructure to use them. As explained above, the Brazilian government has required higher levels of blending of advanced biofuels in its fuel supply, as high as 27 percent, though it has moderated these levels in view of economic circumstances affecting fuel supply. Rather than raising obstacles, the Brazilian vehicle sector has responded positively, including through the development of FFVs that can use blends up to 100% ethanol (E100). As a result, Brazil has replaced 40 percent of its gasoline needs with ethanol. Hence, allowing higher blends is not an insurmountable obstacle as

[69] *Id*. at 33,114
[70] *Id*. at 33,113.
[71] *See Am. Petroleum Ass'n Inst. v. EPA*, 706 F.3d 474, 479 (D.C. Cir. 2013) (recognizing the RFS program's "general mandate" favoring "a technology-forcing agenda," even while holding that "a broad programmatic objective cannot trump specific instructions"); *see also* 153 Cong. Rec. H16659, 16739 (2007) (statement of Rep. Barton) ("We're mandating 35 billion gallons of alternative fuels that right now the technology simply doesn't exist.").

presented by critics of the RFS2 program, but rather a rather rapid result of positive governmental support and market dynamics. UNICA is not suggesting that EPA adopt the Brazilian renewable fuels program, but rather recognize the potential opportunities to expand, rather than limit, the use of renewable fuels. This would allow EPA to avoid derogating from Congressional intent and redrafting statutory volume requirements.

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

EPA should reconsider its proposal to reduce the required volume of advanced biofuels, as well as total renewable fuels, for 2015 and 2016, and possibly beyond. In the Proposed Rule, EPA proposes to require purchase or production of only 2.90 billion gallons of advanced biofuels in 2015 and 3.40 billion gallons in 2016, even though the statute specifies that 5.50 billion gallons shall be required for 2015 and 7.25 billion gallons in 2016. Further, EPA proposes to require purchase or production of only 16.30 billion gallons of total renewable fuels in 2015 and 17.40 million gallons in 2016, when the statute calls for 20.50 billion gallons in 2015 and 17.40 billion gallons in 2016. 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 Plan and more recent climate agreement with Brazil,[72] also expressly favor biofuels for the "role [they] play in increasing our energy security, fostering rural economic development, and reducing greenhouse gas emissions from the transportation sector."[73] As detailed above, UNICA believes EPA's proposed volume reductions are unnecessary and not supported. They are also inconsistent with the purpose of the RFS2 program and the President's climate policy.

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.[74] Congress' preference for the production and use of advanced biofuels over other fuel

[72] 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.
[73] *Id*. at 8.
[74] *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 20222—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

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.[75] 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 2015 and 2016. 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.

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 2014, 2015 and 2016, and reduces the total renewable fuels volume requirements by 20 percent in 2015 and 2016, creating a real possibility that EPA may reset and lower statutory volumes for these two categories of fuels in 2017 under section 211(o)(7)(F).[76] The possibility of 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

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am especially pleased that this RFS includes a substantial requirement for advanced biofuels from a variety of different feedstocks . . . .").

[75] 42 U.S.C. § 7545(o)(2)(B).

[76] *Id*. § 7545(o)(7)(F).

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 and total renewable fuels, it should lower them as little as possible.

Although, as described above, UNICA does not believe the proposed levels of reductions are 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 that the reductions of advanced biofuels and total renewable fuels do not reach 20 percent, at least after 2014.

Without waiving our concerns about EPA's need and process for reducing statutory volumes so significantly, UNICA is supportive of EPA's efforts to bring the 2015 and 2016 volumes up from 2014 and so 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 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 volumes of advanced biofuel and total renewable fuels be made as minimal as possible.

UNICA is particularly concerned with the fact that the 2014, 2015 and 2016 proposed volumes for advanced biofuel fall below 20 percent, as this may potentially lead to a statutory reset in 2017 and beyond for those categories lowered below the 20 percent threshold under section 211(o)(7)(F). Hence, the reductions EPA claims are necessary could have far-reaching and long-term implications for the entire RFS2 program. The same is true for the proposed 2015 and 2016 volumes for total renewable fuels. EPA's ultimate intent with regard to the reset is unclear. Indeed, EPA fails to discuss the reset or its implications anywhere in the Proposed Rule nor how broadly it views its authority to reset other renewable fuel volumes. 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 uncertainly 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 the reset provisions and its current intentions with regard to future volume requirements. The better route would be to keep volumes above the 20 percent threshold and so obviate the concern.

VII. EPA should reconsider the equivalence values to account for lifecycle GHG emissions.

Rather than unnecessarily reducing statutory volumes and potentially harming the import of advanced biofuels fuels like sugarcane ethanol, EPA should consider other actions which could both allow higher volumes of biofuels and encourage the further use of advanced biofuels with low GHG-lifecycles. UNICA provided in its last set of comments an argument for amending its EVs for low lifecycle GHG-emitting advanced biofuels to recognize their role in reducing GHG emissions, and will summarize those arguments again. Given EPA's proposal to reduce statutory volumes so dramatically in 2015 and 2016 with possibly adverse impacts to the integrity of the program, this is a far more salutary approach which maintains consistency with the purpose and principles of the RFS2 program. It would help obligated parties comply with statutory volumes and not require reductions that might lead to a statutory reset. It would thereby assist the President in fulfilling his Climate Change Action Plan and promote the achievement of the U.S. target for the next round of UNFCCC negotiations. It could also alleviate issues related to the "E10 blend wall." EPA should give this alternative serious consideration.

Briefly, in RFS1, EPA established EVs for each of the renewable fuel categories, "representing the number of gallons that can be claimed for [RFS] compliance purposes for every physical gallon of renewable fuel."[77] These EVs adjusted the volumes of the various renewable fuels relative to one another based on their energy content, with fuels having an energy content equivalent to that of ethanol being assigned an EV of 1.0, and fuels with higher energy content being assigned higher EVs. Because it is ethanol, sugarcane ethanol has an EV of 1.0. EPA reasoned that "use of Equivalence Values based on energy content was an appropriate measure of the extent to which a renewable fuel would replace or reduce the quantity of petroleum or other fossil fuel present in a fuel mixture" and thus consonant with Congress' purpose in RFS program to effect that end.[78] In its 2010 RFS2 rule, EPA reevaluated but ultimately reaffirmed its choice to use these same EVs in determining RFS compliance, finding that the considerations that merited the EVs in 2007 continued to exist in 2010, notwithstanding passage of the EISA.

Today, the United States is in a very different situation than it was in 2007 or 2010; accordingly, EPA should reevaluate the EVs established in RFS1 and reaffirmed in RFS2. In 2007 and 2010, demand for renewable fuels exceeded available supplies. In those conditions, the relative scarcity of renewable fuels meant that, even with the compliance preference given to

[77] 75 Fed. Reg. at 14,670, 14,709-14,711.
[78] *Id*.

higher EV fuels, there was sufficient remaining demand to absorb available volumes of sugarcane ethanol and other renewable fuels. As a practical matter, the EVs in RFS1 and RFS2 had little to no effect on demand. Today, however, according to EPA, due to the claimed "E10 blendwall," the supply of renewable fuels exceeds the demand for those fuels.[79] In the present circumstances, refiners are likely to favor renewable fuels with higher EVs (such as biodiesel) over fuels with lower EVs (such as sugarcane ethanol), because those refiners can satisfy their statutory renewable volume obligations with fewer gallons of such high EV fuels.

Under these circumstances, the RFS compliance preference given to biodiesels through their higher EVs has a pernicious effect that EPA appears not to have considered in the Proposed Rule: biodiesels have significantly higher lifecycle GHG emissions than sugarcane ethanol.[80] The present EVs (1.5 for biomass-based diesel and 1.0 for sugarcane ethanol), therefore, are likely to encourage the use of biofuels with higher lifecycle GHG emissions (such as biomass-based diesel) over biofuels with significantly lower lifecycle GHG emissions (such as sugarcane ethanol).

In the present market, where there is insufficient demand for renewable fuels, this preference is likely to result in displacement of sugarcane ethanol by biodiesel, as obligated parties seek to satisfy their renewable volume obligations using the fewest possible gallons of ethanol. This situation is exacerbated by the tax credit accorded to generation of biodiesel but not to sugarcane ethanol.[81] Ultimately, by shrinking the volume of advanced biofuels, EPA is reducing sugarcane ethanol's share in the reduced volume proportionally more than fuels with higher lifecycle GHG emission. This means that overall lifecycle GHG emissions are likely to be higher than they would be if EPA did not assign higher EVs to biodiesels than it does to sugarcane ethanol. Such a result not only imperils the use of sugarcane ethanol but is also directly at odds with the purpose of the EISA, which was to reduce GHG emissions through a preference for fuels with lower lifecycle GHG emissions.

UNICA believes EPA should reconsider revising the EVs to reflect not only the energy content of the various renewable fuels as compared to conventional fuels, but also their lower lifecycle GHG emissions as compared to conventional fuels. Under this approach, a renewable

[79] *See supra* Section IV.1.
[80] Per EPA's 2010 RFS2 rulemaking, sugarcane ethanol achieves a 61% reduction in GHG emissions compared to the gasoline baseline. 75 Fed. Reg. at 14,790. Biodiesel produced from soybean oil, on the other hand, barely exceeds the 50% threshold necessary to qualify it as an advanced biofuel under CAA § 211(o)(1)(B)(i). 75 Fed. Reg. at 14,788.
[81] Although the $1/gallon biodiesel tax credit was set to expire in 2014, the Senate Finance Committee recently voted to convert it to a production tax credit only available for domestic producers.

fuel would be assigned an EV based in part on its energy content and in part on its lifecycle GHG emissions. For instance, an additional .25 EV could be assigned to a renewable fuel for each increment of 10 percent by which that fuel exceeds the 50% lifecycle GHG emissions increment that Congress identified as the threshold for considering a renewable fuel an advanced biofuel. This would be added to the fuel's energy content value to give a total EV. Thus, biodiesel produced from soybean oil would retain its EV of 1.5 due to its higher energy content, but would receive no additional value for lifecycle GHG emissions because its emissions are just at the 50 percent threshold for classification as an advanced biofuel. Sugarcane ethanol would receive no value for enhanced energy content as compared to ethanol (because it is ethanol), but would have an overall EV of 1.25 because its lifecycle GHG emissions are more than 10 percent lower than the threshold for identification as an advanced biofuel. Cellulosic biofuels would have the highest EVs, because they have both high energy content compared to ethanol and low lifecycle GHG emissions compared to conventional fuels.

Adopting this approach to determining EVs would also aid the market in distinguishing between ethanol with low lifecycle GHG emissions (such as sugarcane ethanol) and conventional fuels with higher lifecycle GHG emissions, and would incentivize refiners and other obligated parties to adjust their purchases of ethanol to favor those fuels that conform to the GHG-reduction goals of the EISA. It would be a reasonable, fair and equitable way of recognizing both high energy content and low lifecycle GHG emissions as important goals, and better comport with the purpose and intent of the RFS2. It would be a far better alternative to reducing statutory volumes for the next two years and possibly into the future.

VIII. Conclusions

Brazil has 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 at a crossroads 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. This method 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 disincentivising these fuels by lowering their demand. Doing so is the most effective way to fully effectuate the language and purpose of the RFS2 and

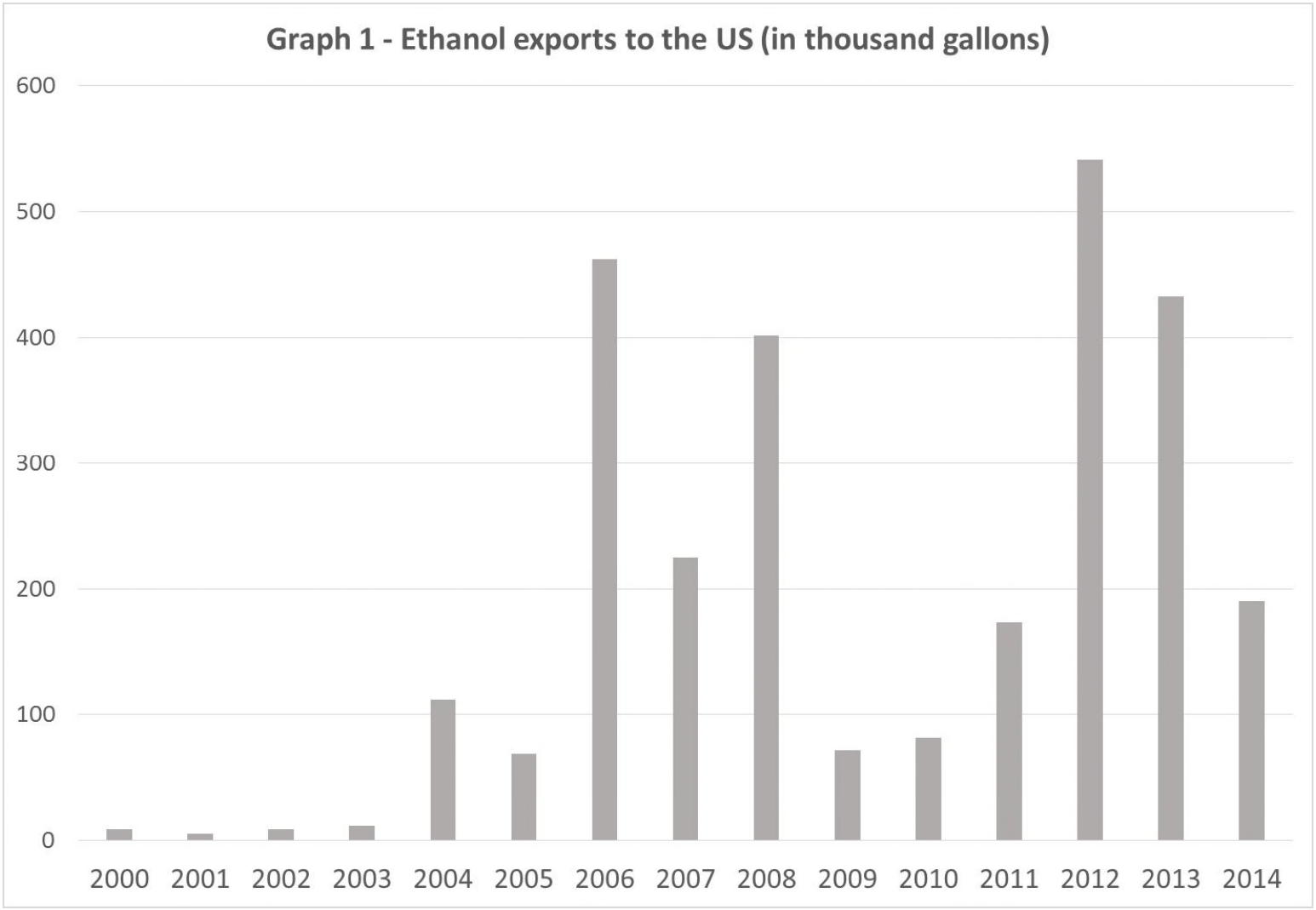
to support the President's goals in his Climate Action Plan and leadership, with Brazil and others, in an international effort to address climate change. UNICA, and its sugarcane ethanol member companies, stand ready to support EPA in its efforts to move forward.

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,

Elizabeth Farina
President & CEO

Leticia Phillips
Representative – North America


Graph 1 - Ethanol exports to the US (in thousand gallons)
600
500
400
300
200
100
0
2000
2001
2002
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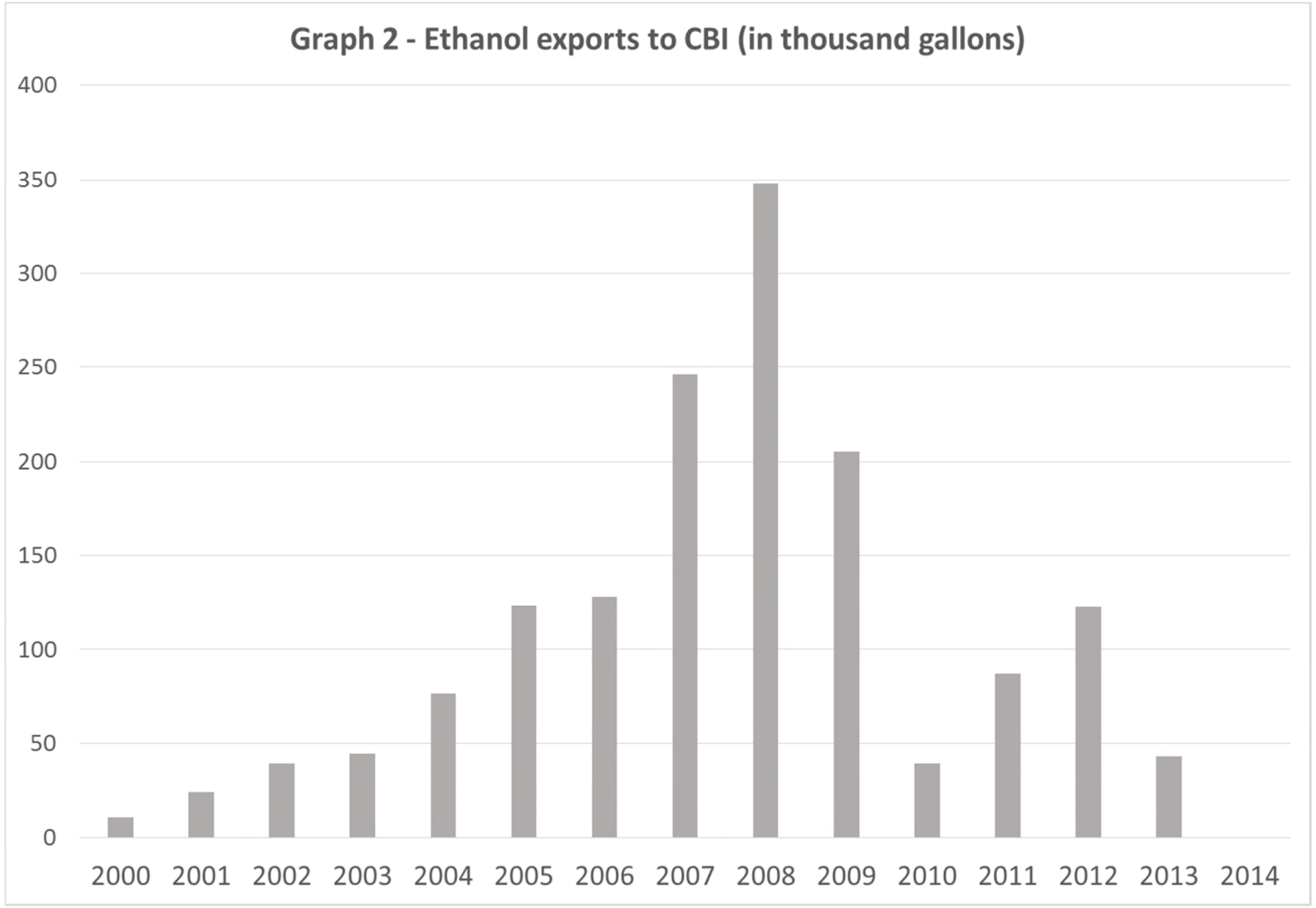
Graph 2 - Ethanol exports to CBI (in thousand gallons)
400
350
300
250
200
150
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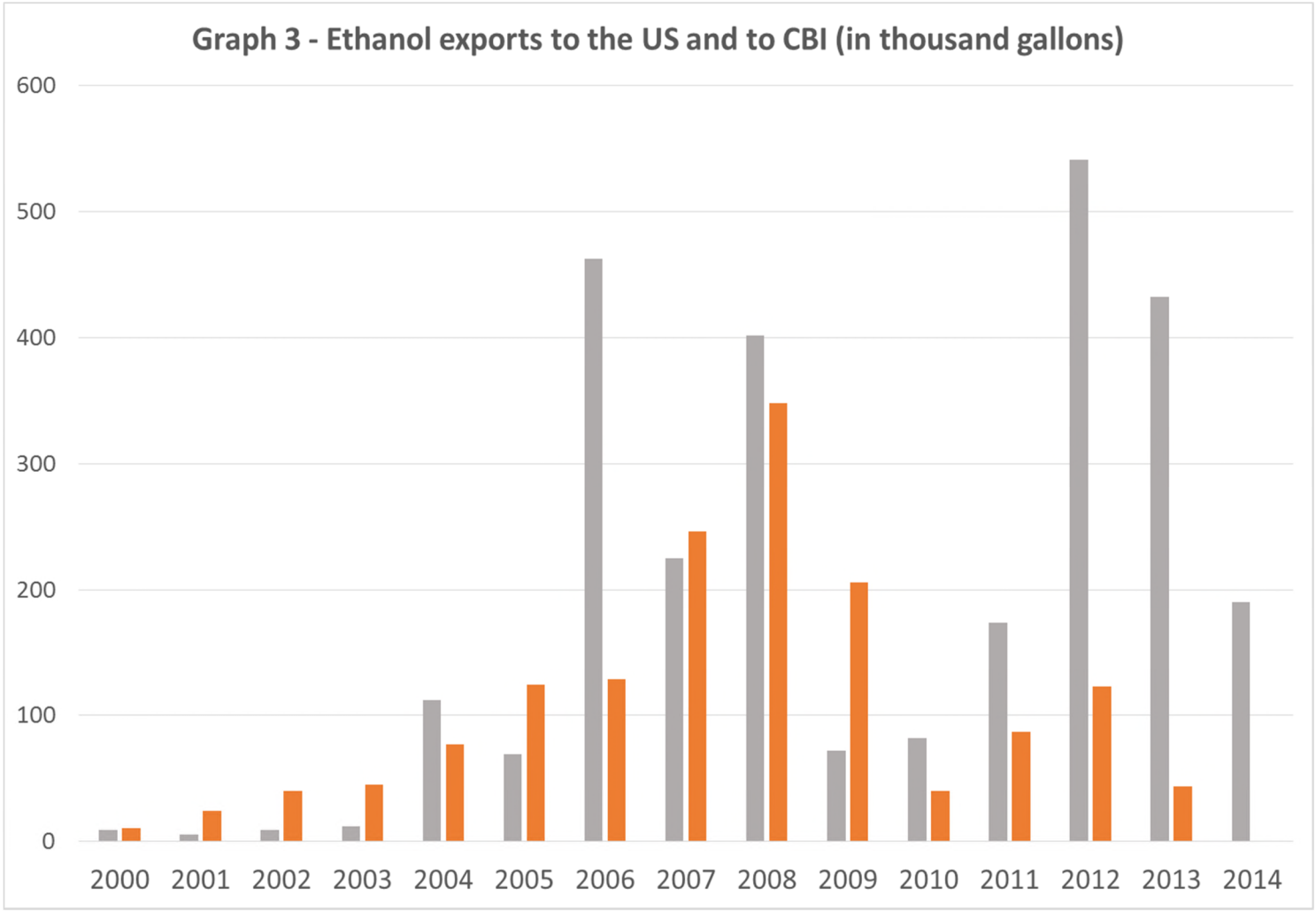
Graph 3 - Ethanol exports to the US and to CBI (in thousand gallons)
600
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300
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100
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2013
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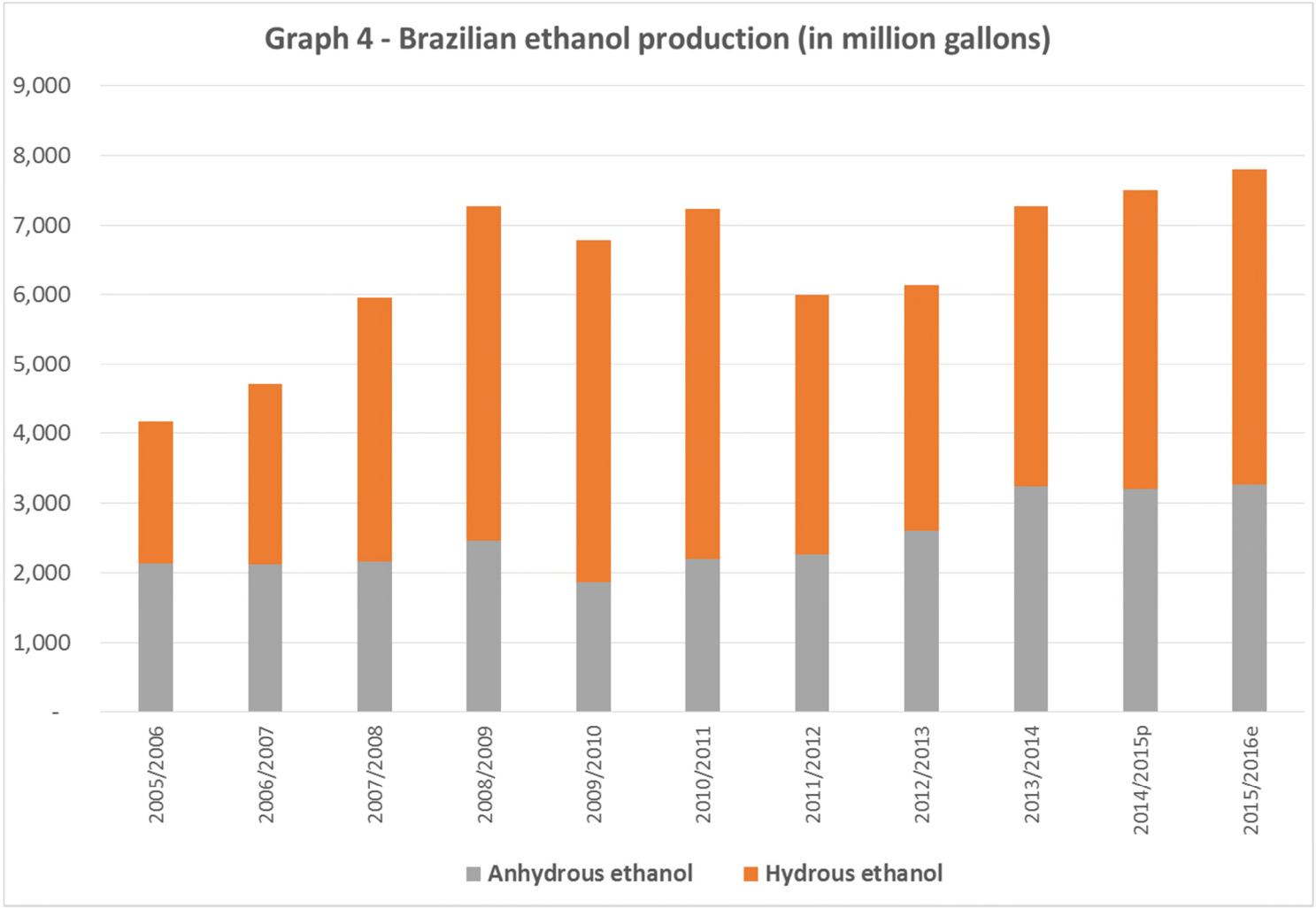
Graph 4 - Brazilian ethanol production (in million gallons)
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
2005/2006
2006/2007
2007/2008
2008/2009
2009/2010
2010/2011
2011/2012
2012/2013
2013/2014
2014/2015p
2015/2016e
Anhydrous ethanol
Hydrous ethanol

Table 1. Ethanol Exports to US (in thousand liters)

Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	11,775	0	3,655	4,620	3,997	38,406	29,163	106,851	12,488	40,258	50,244	23,754	30,051	199,354	109,315
February	4,027			5,369	19,739	16,274	46,917	72,460	74,325	4,780	20,719	56,448	38,436	103,460	269
March	2,341		2,548	4,339	2,613	13,748	107,107	25,808	34,681	5,250	3,017	20,161	39,835	48,018	50,751
April	5,125	5,039			19,712	16,163	68,345	88,596	65,408	3,750	23	20,150	33,088	86,178	89,584
May	5,914		5,993	3,697	78,979	8,357	27,113	112,574	167,367	10,150	93		97,890	110,938	122,436
June			2,518		101,962	10,651	101,505	47,050	143,379	8,409	44,851	60,845	93,789	164,212	94,895
July		5,054	2,490		44,935	17,482	408,176	164,853	247,146	12,785	29,805	45,070	335,419	267,052	40,587
August		3,684			66,560	16,768	341,879	126,089	222,643	57,089	50,689	77,474	260,881	280,719	34,391
September		604	2,457	10,350	25,427	15,434	176,663	59,714	311,174	18,252	5,346	69,479	306,093	137,808	71,296
October			8,348	7,031	30,134	68,073	276,291	30,271	85,586	41,988	19,728	64,201	339,132	180,341	25,333
November		5,286	2,498	9,103	24,107	28,995	82,023	10,848	103,978	27,674	6,088	104,240	225,825	39,742	40,452
December	3,776		4,196	0	6,410	10,223	84,033	4,578	51,250	39,804	79,333	114,066	248,213	18,795	39,924
Total	**32,958**	**19,668**	**34,703**	**44,509**	**424,575**	**260,573**	**1,749,215**	**849,692**	**1,519,426**	**270,190**	**309,935**	**655,889**	**2,048,651**	**1,636,618**	**719,232**
													3,098,298	**2,903,010**	**1,394,076**
													0.661218169	0.563765803	0.515920552

Source: Brazilian Ministry of Industry and Commerce/ SECEX (Department of Foreign Trade)

Table 2. Ethanol Exports to CBI (in thousand liters)

Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	7,500	0	31,843	35,222	30,950	21,836	15,466	89,604	58,463	9,031	15,437	146		81,450	
February	7,500		6,047	15,124	13,780	5,142	26,989	45,033	130,305	31,185			14,860	60,693	
March	25,165		12,106		19,882	48,410	28,669	64,906	83,764	3,806					
April					15,102	30,363	23,884	63,675	103,968	58,204	68	2			11
May		2,022	14,512	1,642	30,414	5,399	35,707	73,391	159,751	161,058	7,603	11,955	2,035		
June				15,188	15,167	13,874	10,692	89,048	130,166	146,934	9,578	19,995	20,818	16,345	
July		28,581		15,253	32,450	44,218	60,379	145,167	157,906	170,293	31,965	82,518	15,547		
August		12,153		13,247	23,946	46,081	25,456	146,198	178,014	55,634	15,239	52,915	27,359		
September		18,061	30,166	15,803	37,203	60,953	65,436	85,634	88,186	93,313	5,059	38,554	78,796		
October			38,052	31,616	5,039	81,896	74,711	44,605	71,034	47,577	31,704	60,962	126,168	4,752	
November		9,695		24,112	44,251	63,638	49,830	31,302	129,045			61,017	44,922		
December		19,277	16,130	1,538	21,636	46,361	68,550	52,761	25,679		32,417		133,349	7	
Total	**40,165**	**89,790**	**148,856**	**168,744**	**289,820**	**468,171**	**485,767**	**931,324**	**1,316,281**	**777,035**	**149,070**	**328,064**	**463,855**	**163,247**	**11**

Source: Brazilian Ministry of Industry and Commerce/ SECEX (Department of Foreign Trade)

Table 3. Ethanol Exports to US (in '000 gallons)

Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	3,111	0	966	1,221	1,056	10,147	7,705	28,230	3,299	10,636	13,274	6,276	7,940	52,669	28,881
February	1,064	0	0	1,418	5,215	4,299	12,395	19,144	19,637	1,263	5,474	14,914	10,155	27,334	71
March	619	0	673	1,146	690	3,632	28,298	6,818	9,163	1,387	797	5,327	10,524	12,686	13,408
April	1,354	1,331	0	0	5,208	4,270	18,057	23,407	17,281	991	6	5,324	8,742	22,768	23,668
May	1,563	0	1,583	977	20,866	2,208	7,163	29,742	44,218	2,682	25	0	25,862	29,310	32,348
June	0	0	665	0	26,938	2,814	26,818	12,431	37,881	2,222	11,850	16,075	24,779	43,385	25,071
July	0	1,335	658	0	11,872	4,619	107,840	43,554	65,296	3,378	7,874	11,908	88,618	70,555	10,723
August	0	973	0	0	17,585	4,430	90,324	33,313	58,822	15,083	13,392	20,469	68,925	74,166	9,086
September	0	160	649	2,735	6,718	4,078	46,674	15,776	82,212	4,822	1,412	18,356	80,870	36,409	18,836
October	0	0	2,206	1,858	7,962	17,985	72,996	7,998	22,612	11,093	5,212	16,962	89,599	47,646	6,693
November	0	1,397	660	2,405	6,369	7,661	21,670	2,866	27,471	7,311	1,608	27,540	59,663	10,500	10,687
December	998	0	1,109	0	1,694	2,701	22,201	1,209	13,540	10,516	20,960	30,136	65,578	4,966	10,548
Total	**8,708**	**5,196**	**9,169**	**11,759**	**112,173**	**68,843**	**462,142**	**224,489**	**401,432**	**71,384**	**81,885**	**173,286**	**541,254**	**432,394**	**190,021**

Source: Brazilian Ministry of Industry and Commerce/ SECEX (Department of Foreign Trade)

Table 4. Ethanol Exports to CBI (in '000 gallons)

Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
January	1,982	0	8,413	9,306	8,177	5,769	4,086	23,673	15,446	2,386	4,079	39	0	21,519	0
February	1,982	0	1,598	3,996	3,641	1,358	7,130	11,898	34,427	8,239	0	0	3,926	16,035	0
March	6,649	0	3,198	0	5,253	12,790	7,574	17,148	22,130	1,005	0	0	0	0	0
April	0	0	0	0	3,990	8,022	6,310	16,823	27,468	15,378	18	0	0	0	3
May	0	534	3,834	434	8,035	1,426	9,434	19,390	42,206	42,551	2,009	3,159	538	0	0
June	0	0	0	4,013	4,007	3,666	2,825	23,526	34,390	38,820	2,530	5,283	5,500	4,318	0
July	0	7,551	0	4,030	8,573	11,682	15,952	38,353	41,719	44,991	8,445	21,801	4,108	0	0
August	0	3,211	0	3,500	6,327	12,175	6,726	38,626	47,031	14,699	4,026	13,980	7,228	0	0
September	0	4,772	7,970	4,175	9,829	16,104	17,288	22,625	23,299	24,653	1,337	10,186	20,818	0	0
October	0	0	10,053	8,353	1,331	21,637	19,739	11,785	18,767	12,570	8,376	16,106	33,334	1,255	0
November	0	2,562	0	6,370	11,691	16,813	13,165	8,270	34,094	0	0	16,121	11,868	0	0
December	0	5,093	4,262	406	5,716	12,249	18,111	13,940	6,784	0	8,565	0	35,231	2	0
Total	**10,612**	**23,723**	**39,328**	**44,582**	**76,570**	**123,691**	**128,340**	**246,056**	**347,761**	**205,293**	**39,384**	**86,675**	**122,550**	**43,130**	**3**

Source: Brazilian Ministry of Industry and Commerce/ SECEX (Department of Foreign Trade)

Table 5. Brazilian ethanol production (in million gallons)

Source: UNICA (Brazilian Sugarcane Industry Association) and MAPA (Ministry of Agriculture, Livestock and Supply). Note: 2014/2015p - preliminary; 2015/2016e-estimate

Crop year	Anhydrous ethanol	Hydrous ethanol
2005/2006	2,131	2,049
2006/2007	2,122	2,593
2007/2008	2,165	3,787
2008/2009	2,467	4,806
2009/2010	1,867	4,921
2010/2011	2,199	5,034
2011/2012	2,267	3,725
2012/2013	2,601	3,535
2013/2014	3,229	4,048
2014/2015p	3,195	4,306
2015/2016e	3,250	4,560

Table 6. Brazilian ethanol exports
Source: Secex

Crop year	Thousand liters	Thousand gallon
2006	3,416,555	902,654
2007	3,530,145	932,664
2008	5,118,696	1,352,360
2009	3,308,384	874,075
2010	1,905,419	503,412
2011	1,967,556	519,828
2012	3,098,298	818,570
2013	2,903,010	766,975
2014	1,394,076	368,315