



BRAZILIAN SUGARCANE INDUSTRY ASSOCIATION

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VIA ELECTRONIC MAIL (a-and-r-docket@epa.gov)

Air and Radiation Docket and Information Center
Environmental Protection Agency
Mailcode 2822T
1200 Pennsylvania Ave. NW
Washington, D.C. 20460

RE: UNICA's Comments on Proposed "2014 Standards for Renewable Fuel Standard Program," 78 Fed. Reg. 71,732 (Nov. 29, 2013)

Docket No. EPA-HQ-OAR-2013-0479

To Whom It May Concern:

The Brazilian Sugarcane Industry Association ("UNICA") appreciates the opportunity to provide these comments on the proposed rule, entitled "2014 Standards for the Renewable Fuel Standard Program" ("NPRM" or "proposed rule"), 78 Fed. Reg. 71,732, published by the United States Environmental Protection Agency ("EPA") on November 29, 2013.

UNICA is the largest representative of Brazil's sugar, ethanol, and bioelectricity producers. Its members are responsible for more than 50% of Brazil's ethanol production and 60% 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. Sugarcane ethanol production uses less than 1.5% of Brazil's arable land and reduces lifecycle greenhouse gas ("GHG") emissions by up to 90% 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% of the country's total energy needs. 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 beginning to offer bio-based hydrocarbons that can replace carbon-intensive fossil fuels and chemicals.

While, in the past, UNICA has supported EPA's decisions implementing the Renewable Fuels Standards Program ("RFS2"), it strongly opposes EPA's favored proposal—Option 3 of the NPRM—to reduce the 2014 statutory volume requirements for advanced biofuels and total renewable fuels. UNICA's opposition stems from two principal concerns. First, UNICA believes implementing the proposal would jeopardize recent progress toward increased use of efficient, renewable biofuels with low lifecycle GHG emissions. Insofar as the proposed reductions prioritize carbon-intensive fossil fuels and conventional biofuels over cleaner, more efficient advanced biofuels like sugarcane ethanol, they are contrary to the purposes of the Clean Air Act ("CAA") and to the President's Climate Action Plan, both of which favor the use of low-GHG advanced biofuels, such as those produced from sugarcane, over the use of fossil fuels and

conventional biofuels. Second, UNICA believes that all or a significant portion of the proposed reductions for advanced biofuels and total renewable fuels are beyond the scope of EPA's authority under the CAA. Therefore, UNICA urges EPA to reconsider its support for Option 3 and, instead, adopt what the NPRM refers to as Option 1. That option appropriately focuses on the volumes of advanced renewable fuels that are likely to be available for use in the United States in 2014 and, thus, is in accord both with Congress' intent in creating the RFS2 and with the President's Climate Action Plan.

These comments, which build on UNICA's prior comments on the RFS2 program, are intended to provide updated information regarding Brazilian sugarcane ethanol production and to express UNICA's profound concerns about EPA's unnecessary and unjustified 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. Review recent scientific literature addressing the lifecycle GHG benefits of Brazilian sugarcane ethanol as compared to fossil fuels and other biofuels;
3. Explain why EPA may not, consistent with the CAA, reduce the volume requirement for total renewable fuels as scheduled in the proposed rule;
4. Explain why EPA should not, consistent with the CAA and the President's Climate Change Action Plan, reduce the volume requirement for advanced biofuels as scheduled in the proposed rule; and
5. Explain why EPA should reconsider the Equivalence Values 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 Equivalence Values.

Given UNICA's extensive experience with, and knowledge of, sugarcane ethanol production, and its interest in the successful, lawful implementation of the RFS2 program, we 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. Ever since Congress passed the EISA, UNICA has represented Brazil's sugarcane biofuel industry in matters regarding the RFS2 program. Brazil has decades of experience in producing sugarcane ethanol and in utilizing 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 2009.¹ 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.

Second, since EPA issued the RFS2 rule, 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 sufficient quantities of Brazilian sugarcane ethanol would be available to achieve the EISA's statutory volume requirements for advanced biofuels. That remains the case now; the Brazilian sugarcane industry has more than adequate capacity to help achieve the statutorily-mandated volumes of advanced ethanol. UNICA also helped EPA monitor Brazilian exports and imports of ethanol, and provided EPA with perspectives on how changes to the United States' laws and regulations, such as the expiration of the Volumetric Ethanol Excise Tax Credit, could affect Brazilian sugarcane ethanol exports to the United States.

Finally, 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%, UNICA provided detailed comments describing its expertise in ethanol blends and Brazil's extensive experience using ethanol blends that exceed 10%.² 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 blendwall issue without running afoul of Congress' mandate to increase the volume of renewable fuels used in the United States.

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, along with 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. They have invested heavily in increasing production and improving export logistics to satisfy growing demand triggered, in part, by the RFS2. Having added a number of new mills since Congress enacted the RFS2, Brazil's sugarcane ethanol producers are currently investing over \$3.5 billion in new ethanol pipelines, inland waterways,

¹ UNICA, Submission of Comments: Regulation of Fuels and Fuel Additives: Changes to Renewable Fuels Standards Program, Docket EPA-HQ-OAR-2005-0161 (Sept. 25, 2009) ("RFS2 Comments").

² UNICA, Submission of Comments: Clean Air Act Waiver to Increase the Allowable Ethanol Content of Gasoline to 15 Percent, Docket EPA-HQ-OAR-2009-2011 (July 20, 2009).

and port facilities. As a result, in 2014 alone, UNICA expects to see a 15% increase in anhydrous sugarcane ethanol production, aimed largely at meeting scheduled U.S. demands for renewable fuels. As the largest trade association representing Brazilian sugarcane ethanol producers, UNICA is committed to partnering 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.

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

One of Congress' primary purposes in passing the EISA was to reduce GHG emissions by utilizing advanced biofuels that offer superior GHG benefits on a lifecycle basis.³ 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.⁴ These lifecycle analyses formed the basis for EPA's approval of Brazilian sugarcane ethanol as an advanced biofuel in the final RFS2 Rule.⁵ More recent studies, published after the RFS2 Rule, continue to support EPA's conclusions regarding the GHG benefits of sugarcane ethanol.⁶

Sugarcane is the world's most efficient feedstock produced at a commercial scale.⁷ One of its greatest benefits is its low GHG emissions rate relative to other fuels.⁸ Traditional lifecycle analysis has shown that sugarcane ethanol, as currently produced in Brazil, reduces GHG

³ See Pub. L. No. 110-140, 121 Stat. 1492, 1492 (2007) (providing that a purpose of the EISA is to "increase the production of clean renewable fuels").

⁴ 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.

⁵ 75 Fed. Reg. 14,670 (Mar. 26, 2010).

⁶ 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>.

⁷ See Jose Goldemberg et al., *Ethanol for a Sustainable Energy Future*, SCIENCE 315:808 (2007): 809.

⁸ 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.

emissions by up to 90% when compared to traditional gasoline.⁹ 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.¹⁰

Several factors explain how sugarcane ethanol reduces GHG emissions. First, sugarcane itself sequesters 22-36 metric tons of CO₂ per hectare per year.¹¹ Thus, the process of growing sugarcane as a feedstock actually eliminates CO₂ from the atmosphere. Second, modern sugarcane growing practices minimize emissions from land use changes by replanting sugarcane crops only once every six years, thereby reducing the release of CO₂ following tillage. Because harvesting sugarcane—whether manually or mechanically—does not destroy its complex root system, a new stalk will grow and be harvested for five to seven years before its yields drop and a new planting is required.¹² Third, the use of byproducts like vinasse, a nutrient-rich liquid resulting from sugarcane ethanol distillation, and organic pest management techniques helps offset traditionally carbon-intensive agricultural inputs.¹³

A recently published peer-reviewed article shows that Brazil's use of sugarcane ethanol as a transportation fuel since 1975 has led to a reduction of CO₂ emissions of roughly 600 million tons, even taking into account factors like land use changes. Had Brazil applied modern-day efficiency measures—such as burning bagasse¹⁴ for electricity cogeneration—during that period, net emissions reductions would have exceeded 1 billion tons of CO₂. Going forward, studies project that use of sugarcane ethanol in Brazil, alone, could mitigate 836 million tons of CO₂ annually over a twenty-year period.¹⁵

Still more energy may be captured from sugarcane in coming years, especially given that 1 metric ton of sugarcane has the same energy content as 1.2 barrels of oil.¹⁶ Sugarcane juice—the simple sugars that are currently used to produce sugar and ethanol—represents only one-third of the plant's energy value. The remaining two-thirds is bagasse and foliage (also referred to as straw or trash) that, until recently, was burned before harvest to generate vapor and produce electricity for use at sugarcane mills. Today, however, mills generate surplus electricity which they then feed into Brazil's electrical grid, replacing carbon-intense forms of electricity, like electricity from thermoelectric plants. Estimates are that, through progress in mechanized harvesting and the phase-out of open-air burning, about 40% of sugarcane straw will be used to generate bioelectricity in the near future. These improvements, along with new investments in

⁹ See SUGARCANE ETHANOL : CONTRIBUTIONS TO CLIMATE CHANGE MITIGATION AND THE ENVIRONMENT 17 (Peter Zuubier & Jos Van de Vooren eds. 2008).

¹⁰ 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>.

¹¹ See Weber Amaral et al., *Environmental Sustainability of Sugarcane Ethanol in Brazil*, in SUGARCANE ETHANOL: CONTRIBUTIONS TO CLIMATE CHANGE MITIGATION AND THE ENVIRONMENT 113-138 (Peter Zuubier & Jos Van de Vooren eds. 2008).

¹² See H. BAKKER, SUGAR CANE CULTIVATION AND MANAGEMENT 162-63 (1999).

¹³ *Sustainability Report*. Tech. Sao Paulo, Brazil: UNICA 2008, available at <http://www.unica.com.br/download.asp?mmdCode={D1814075-0E5C-4BFB-BA2C-EF428FF58F33}>. This report met the requirements of the Global Reporting Initiative..

¹⁴ Bagasse is the fibrous residue that remains after sugarcane stalks are crushed to extract their juices.

¹⁵ See Sergio Pacca & Jose Roberto Moreira, *Historical Carbon Budget of the Brazilian Ethanol Program*, ENERGY POLICY (2009).

¹⁶ Jose Goldemberg, *The Brazilian Biofuels Industry*, BIOTECHNOLOGY FOR BIOFUELS 1.6 (2008).

transmission grids and high-pressure boilers, promise considerable expansion of the sugarcane bioelectricity industry, to the point that sugarcane electricity could supply over 10% of Brazil's electricity by 2020, as opposed to the roughly 3% it currently supplies. Perhaps most importantly, bioelectricity from sugarcane will obviate the need for new thermal power plants and the fossil fuels they consume.¹⁷

Changes of those sorts have helped make sugarcane ethanol one of the most environmentally responsible biofuels on the market today. Indeed, 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.¹⁸ 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 and that President Obama seeks to further in his June 2013 Climate Action Plan. Consistent with Congress' purpose in the EISA and the President's goals in his Climate Action Plan, EPA should avoid taking steps—such as those proposed in the NPRM—that prioritize other, less GHG-efficient fuels over more GHG-efficient advanced biofuels like sugarcane ethanol.

III. EPA may not, consistent with the Clean Air Act, reduce the volume requirement for total renewable fuels as scheduled in the proposed rule.

In Option 3 of the NPRM, EPA proposes to dramatically and unlawfully reduce the applicable volume of renewable fuels required under the CAA. In the RFS2, Congress specifically mandated that 18.15 billion gallons of total renewable fuels be incorporated into the United States' 2014 fuel supply. In Option 3, however, EPA proposes to reduce this volume by 2.94 billion gallons, more than 16% from the statutorily-mandated volume. To justify its proposed reduction of the total renewable fuel volume from 18.15 billion gallons to just 15.21 billion gallons, EPA cites two statutory provisions: (1) the cellulosic waiver authority in § 211(o)(7)(D)(i) of the CAA;¹⁹ and (2) the general waiver authority in § 211(o)(7)(A) of the CAA.²⁰ Nowhere in the NPRM does EPA explain precisely how many gallons it contends each of these provisions authorizes it to reduce; it simply declares that they provide such authority when read in combination with one another. A review of the provisions, however, reveals that they cannot be read—individually or in tandem—to support the 2.94 billion gallon reduction contemplated in Option 3. The cellulosic waiver provision cannot support the reduction because EPA's authority under that provision is limited to reducing the required volumes of advanced

¹⁷ Tyler McNish et al., *Sweet carbon: An Analysis of Sugar Industry Carbon Market Opportunities under the Clean Development Mechanism*, ENERGY POLICY (2009).

¹⁸ 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.

¹⁹ 42 U.S.C. § 7545(o)(7)(D)(i).

²⁰ *Id.* at § 7545(o)(7)(A).

biofuel and total renewable fuel by, *at most*, an amount equivalent to the projected production shortfall for cellulosic biofuel.²¹ For 2014, EPA projects a cellulosic biofuel shortfall of roughly 1.73 billion gallons, yet it proposes to cut required total renewable fuel volumes by 2.94 billion gallons—1.21 billion gallons more than the cellulosic biofuel waiver authority authorizes under any circumstance. Moreover, UNICA does not believe that the cellulosic waiver provision can be read, consonant with the purposes of the RFS2 program, to authorize reductions in advanced biofuel volumes or total renewable fuel volumes where such fuels are available to replace any projected shortfall in cellulosic biofuels. The general waiver provision cannot support the reduction because EPA has not even attempted to show that severe economic or environmental harm would result if the statutorily-mandated volumes were required; nor has EPA shown that there is an “inadequate domestic supply” of renewable fuel justifying the proposed reduction. EPA must make such a showing before exercising its powers under the general waiver provision. Because it has not done so in this case, EPA may not make *any* reduction whatsoever under its general waiver authority. “Combining” the authority of these two provisions does not cure these fatal flaws in EPA’s analysis. The bases for these objections to the NPRM are further explained below.

A. Reductions under the Cellulosic Waiver Provision, § 211(o)(7)(D)(i)

EPA’s preferred option in the NPRM (Option 3)—proposing a 2.94 billion gallon reduction in the required volumes of advanced biofuels and total renewable fuels for 2014—misapplies EPA’s limited authority under the cellulosic waiver provision in CAA § 211(o)(7)(D)(ii). That waiver provision can support, *at most*, a 1.73 billion gallon reduction of total renewable fuel volumes to account for the projected 2014 shortfall in cellulosic biofuel production.²² Even that more limited reduction, however, is unjustified for 2014, as EPA does not appear to dispute that there is an adequate projected supply of advanced biofuels, including sugarcane ethanol, to make up for at least some of the projected shortfall in cellulosic biofuel production.

The text, structure, and purposes of the EISA, taken together, indicate a clear congressional intent to provide EPA with discretion to reduce the congressionally-specified volumes of advanced biofuels and total renewable fuels *only to the extent* there is inadequate production capacity of such fuels to make up for any shortfall in cellulosic biofuel production. That is not the case here, and EPA’s interpretation of § 211(o)(7)(D)(i), as allowing the Agency to cut the applicable advanced biofuel and total renewable fuel volumes, even where such advanced biofuels and renewable fuels are available to fill the shortfall in cellulosic biofuel production, is neither consistent with Congress’ expressed intent in the statute nor a reasonable interpretation of any ambiguity in the cellulosic biofuel waiver provision.²³ Ultimately, even

²¹ See *id.* at § 7545(o)(7)(D)(i) (“For any calendar year in which the Administrator makes such a reduction [in the required volume of cellulosic biofuels], the Administrator may also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by *the same or a lesser volume.*”) (emphasis added).

²² UNICA accepts for purposes of these comments EPA’s conclusion that cellulosic biofuel production will only be 17 million gallons in 2014, well below the 1.75 billion gallons specified for 2014 in Section 211(o)(2)(B)(i)(II).

²³ See *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).

where a statutory provision seems ambiguous, the interpretive discretion granted the agency is not limitless. The question, always, is discerning Congress' intent and then determining whether the agency, in interpreting a provision, has acted reasonably in light of congressional intent. As Justice Scalia wrote in *Entergy Corp. v. Riverkeeper, Inc.*, explaining the overlap between the *Chevron* Step I and *Chevron* Step II inquiries, "if Congress has directly spoken to an issue then any agency interpretation contradicting what Congress has said would be unreasonable."²⁴

Section 211(o)(7)(D)(i) is carefully worded. It provides:

For any calendar year for which the projected volume of cellulosic biofuel production is less than the minimum applicable volume established under paragraph (2)(B) [1.75 billion gallons for 2014], as determined by the Administrator based on the estimate provided under paragraph (3)(A), not later than November 30 of the preceding calendar year, the Administrator *shall* reduce the applicable volume of cellulosic biofuel required under paragraph (2)(B) to the projected volume available during that calendar year. For any calendar year in which the Administrator makes such a reduction, the Administrator *may* also reduce the applicable volume of renewable fuel and advanced biofuels requirement established under paragraph (2)(B) by the same or a lesser volume.²⁵

In short, this waiver provision says three things: (1) EPA *must* reduce the statutorily-specified volumes of cellulosic biofuel when there is a cellulosic biofuel production shortfall; (2) EPA *may*—but, significantly, *is not required to*—reduce the advanced biofuel and total renewable fuel volumes in a calendar year in which there is a cellulosic biofuel production shortfall; and, (3) EPA *may not* reduce advanced biofuel and total renewable fuel volumes beyond the projected shortfall of cellulosic biofuels.

Congress' intent in this provision, and the choices it made crafting it, are critical. First, as EPA points out in the NPRM,²⁶ Congress very carefully delineated, and then specified annual applicable volumes for, each of four categories of biofuels: cellulosic biofuel, biomass-based diesel, advanced biofuels, and total renewable fuel.²⁷ Advanced biofuels are a nested subcategory of renewable fuels, and cellulosic biofuels and biomass-based diesel are both nested subcategories within the advanced biofuel category.²⁸ Though Congress certainly could have, it conspicuously did not further divide either the renewable fuel or the advanced biofuels categories. For instance, Congress did not in any way distinguish between ethanol and non-ethanol biofuels in the advanced biofuel category (nor did it create any energy equivalence values).²⁹ The statute treats both ethanol and non-ethanol advanced biofuels equally and indistinguishably as the same thing—advanced biofuels. EPA has previously determined that sugarcane ethanol is an advanced biofuel because of its low lifecycle GHG emissions, a conclusion it reaffirmed most recently in its 2013 RFS final rule.³⁰ There is thus no basis in the

²⁴ 556 U.S. 208, 218 n.4 (2009).

²⁵ 42 U.S.C. § 7545(o)(7)(D)(i) (emphasis added).

²⁶ 78 Fed. Reg. 71,732, 71,734/2 (Nov. 29, 2013).

²⁷ See 42 U.S.C. § 7545(o)(2)(B).

²⁸ EPA expressly notes this nesting in the NPRM. 78 Fed. Reg. at 71,734/1-2.

²⁹ See *infra* at 21-22.

³⁰ 78 Fed. Reg. 49,794, 49,794/2 (Aug. 15, 2013).

statute for discounting, excluding, or otherwise ignoring sugarcane ethanol volumes or other ethanol advanced biofuel volumes, while crediting non-ethanol advanced biofuel volumes, in calculating the advanced biofuel required volumes for 2014, as EPA has proposed to do in Option 3.³¹ When Congress made the choice to identify and specify volumes for certain subcategories of advanced biofuels (cellulosic biofuels and biomass-based diesel) but not others, it thereby deprived EPA of discretion to create and either favor or discriminate against other subcategories.³² EPA must therefore consider and include the available volumes of ethanol advanced biofuels when calculating the total required volume of advanced biofuels to be used in 2014.

Additionally, and importantly, cellulosic biofuels and biomass-based diesel are each *separate subcategories* within the category of advanced biofuels, with separately specified required volumes. The statute specifies a separate volume for the advanced biofuels category. A projected production shortfall in one subcategory therefore does not equate to a shortfall in another. Thus, the projected production shortfall in cellulosic biofuels for 2014 does not mean there will be a shortfall in production of sugarcane ethanol or of advanced biofuels in general; it is merely a shortfall in a single, discrete subcategory of advanced biofuels, one that can be compensated for through available production in other subcategories.

Also, as Congress made equally clear, one of the key purposes of the EISA and its renewable fuels mandate is to promote the production and use of advanced fuels with lower lifecycle GHG emissions (such as sugarcane ethanol and cellulosic biofuels) over fuels with higher lifecycle GHG emissions (such as petroleum-based fuels and conventional biofuels). In CAA § 211(o)(1)(B)(i), Congress defined “advanced biofuel” as “renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50% less than baseline lifecycle greenhouse gas emissions.”³³ In § 211(o)(2)(B), Congress specified a schedule of required renewable fuel use specifically designed to increase the volumes of advanced biofuels as a percentage of total renewable fuels. For instance, in 2006 Congress mandated that advanced biofuels represent only 0.6 billion gallons out of a required total renewable fuel volume of 4.0 billion gallons (or 15% of the renewable fuels volume). In 2014, advanced biofuels are to represent 20% of total renewable fuels (3.75b gal of 18.15b gal). By 2016, they are to account for 32.6% of required renewable fuels (7.25b gal of 22.25b gal), and by 2022 they are to account for over 58% of required renewable fuels (21b gal of 36 b gal), with *all* increases in renewable fuel requirements consisting of advanced biofuels. Indeed, Title II of EISA, in which Congress established the RFS2 program, is specifically titled, “Energy Security Through Increased Production of Biofuels.” All of this is further and conclusive evidence of Congress’ express intent in EISA to *increase* biofuel production annually, not to limit it as EPA has proposed to do in Option 3 of the NPRM. Viewed in light of these critical points, §

³¹ See, e.g., 78 Fed. Reg. 71,732, 71,754/2 (Nov. 29, 2013) (under Option 3, the “appropriate volume” of advanced biofuel for 2014 “would include the required volume of cellulosic biofuels and biomass-based diesel, which are set separately, as well as any additional volumes of non-ethanol advanced biofuels projected to be reasonably achievable”).

³² See *United States v. Vonn*, 535 U.S. 55, 65 (2002) (“[E]xpressing one item of [an] associated group or series excludes another left unmentioned.”).

³³ 42 U.S.C § 7545(o)(1)(B)(i).

211(o)(7)(D)(i) *cannot* reasonably be read to authorize the sorts of reductions in advanced and total renewable fuels volumes that EPA proposes in Option 3.

In Option 3, EPA proposes to reduce the required volume of total renewable fuels by 2.94 billion gallons, even though the shortfall in cellulosic biofuel production it projects is only 1.73 billion gallons. The first sentence of § 211(o)(7)(D)(i) states that EPA “shall” reduce the required volume of *cellulosic biofuel* to accord with its production projections for any particular calendar year. This EPA has done, proposing to reduce the required volume of cellulosic biofuel for 2014 from 1.75 billion gallons to 17 million gallons to accord with EPA’s projections of actual cellulosic biofuel production. UNICA has no quibble with EPA’s proposed reduction in the required volume of cellulosic biofuel for 2014. But the second sentence of § 211(o)(7)(D)(i) dictates a far different outcome than that which EPA proposes in Option 3. Unlike the first sentence, which mandates a reduction in cellulosic biofuel production when actual production falls behind projected production, the second sentence says only that EPA “*may* also reduce the applicable volume of renewable fuel and advanced biofuels requirement” when it reduces the cellulosic biofuel volume.

This distinction—between the word “shall” in the first sentence of § 211(o)(7)(D)(i) and the word “may” in the second sentence—is critical. It indicates, consistent with Congress’ intent to reduce lifecycle GHG emissions by promoting increased production and use of advanced biofuels and renewable fuels, that EPA should decline to adjust the statutorily-specified volume of advanced biofuels and total renewable fuels *except to the extent* that the projected shortfall in cellulosic biofuel production cannot be made up through the production and use of other available advanced biofuels, such as sugarcane ethanol, and other renewable fuels. This is exactly how EPA has addressed similar shortages of cellulosic biofuels in past rulemakings.³⁴ In this case, however, EPA’s favored interpretation—under which it purports to have the discretion to make vast cuts in the applicable volumes of advanced biofuels and renewable fuels *even when abundant supplies of such fuels are available to meet the statutorily-mandated volumes notwithstanding any projected shortfall in cellulosic biofuel production*—flouts Congress’ intent to promote the increased production and use of advanced biofuels and renewable fuels.

Indeed, had Congress actually intended to allow EPA to do what EPA proposes in Option 3, Congress would have written the second sentence of § 211(o)(7)(D)(i) in mandatory language, as it did the first sentence; it would have provided that, in the event of a projected shortfall in cellulosic biofuel production, EPA “*shall* also reduce” the required volumes of advanced biofuels and total renewable fuels by an equivalent amount. In that case, the reductions in projected volumes of cellulosic biofuel production would necessarily be reflected not only in the required volumes of cellulosic biofuel for that calendar year, but also in the required volumes of advanced biofuels and total renewable biofuels, the parent categories of which cellulosic biofuels are a subcategory. In short, the required volumes of each higher parent category (advanced

³⁴ See, e.g., 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.”).

biofuels and total renewable fuels) would always reflect a “pass-through” of any production shortfalls in cellulosic biofuels. But that is not what Congress wrote. Instead, Congress specified annual volumes for the advanced biofuels and renewable fuels categories that are not tied to the volumes of the fuels within their nested subcategories, and then provided that EPA “*may* also reduce” the volumes of advanced biofuels and total renewable fuels if EPA projected a shortfall in cellulosic biofuel production, but by no more than “the same or a lesser volume.” This clearly contemplates that EPA may choose not to reduce the statutorily-specified advanced biofuel and total renewable fuel volumes *at all*, notwithstanding any projected shortfall in cellulosic biofuel production. This can only be because Congress contemplated that any cellulosic biofuel shortfall could be made up by additional volumes of other advanced biofuels and renewable fuels, so that the required volumes of advanced biofuels and renewable fuels would remain the same notwithstanding the cellulosic biofuel shortfall. This reading is also consistent with Congress’ intent to increase overall production and use of advanced biofuels and renewable fuels each year.

EPA’s reading, on the other hand, is not consonant with Congress’ clear intent. In the NPRM, EPA states that the cellulosic waiver provision “does not provide any explicit criteria that must be met or factors that must be considered when making a determination as to whether and to what degree to reduce the advanced biofuel and total renewable fuel applicable volumes based on a reduction in cellulosic biofuel volumes under CAA section 211(o)(7)(D)(i).”³⁵ EPA therefore concludes that it “can consider the criteria described in sections 211(o)(2)(B)(ii) and 211(o)(7)(A) in determining appropriate reductions in advanced biofuel and total renewable fuel under the cellulosic waiver authority at section 211(o)(7)(D)(ii), or any other factors that may be relevant.”³⁶

As we have already noted above, the cellulosic waiver provision *does* provide criteria when § 211(o) is read as a whole: under no circumstance may EPA reduce the volume of advanced biofuel and renewable fuel by more than the amount of the proposed reduction of cellulosic biofuel, and EPA may not reduce the volume to the extent that other advanced biofuels or renewable fuels are available to make up the projected shortfall in cellulosic biofuel. Indeed, EPA, itself, has taken exactly that position in the past.³⁷ Moreover, by their express terms, the factors listed in § 211(o)(2)(B)(ii) are applicable *only in the years following those for which Congress specified volumes* (i.e., after 2022 in the case of advanced biofuels and renewable fuels). Congress could have made those factors applicable in earlier years or when a waiver provision was invoked, but it did not. Further, even if those factors could be applied, they would be subject to the proviso in the very next paragraph of the statute stating that, “[f]or the purpose of making the determinations in [§ 211(o)(2)(B)(ii)], for each calendar year, the applicable volume of advanced biofuel shall be at least the same percentage of the applicable volume of renewable fuel as in calendar year 2022.”³⁸ As previously noted in these comments, in 2022 advanced biofuels must represent over 58% of renewable fuel volumes. EPA, however, proposes

³⁵ 78 Fed. Reg. at 71,755/2.

³⁶ *Id.*

³⁷ 78 Fed. Reg. 9,282, 9,295/3 (Feb. 7, 2013) (“However, in general we believe that it would not be consistent with the energy security and greenhouse gas reduction goals of the statute to reduce the applicable volume of advanced biofuel set forth in the statute if there are sufficient volumes of advanced biofuels available, even if those volumes do not include the amount of cellulosic biofuel that Congress may have desired.”).

³⁸ 42 U.S.C. § 7545(o)(2)(B)(iii).

in Option 3 that advanced biofuels volumes be only 14.4% of total renewable fuel volumes for 2014. Thus, the factors in § 211(o)(2)(B)(ii) either cannot govern in 2014 or, given what EPA proposes, are being grossly misapplied.³⁹

In short, EPA's reading of the cellulosic waiver provision turns a projected shortfall in the production of one subcategory of advanced biofuels (cellulosic biofuel) into a free license to gut the annual use requirements for other advanced biofuels (particularly sugarcane ethanol) and renewable fuels, even where those fuels are readily available and plentiful, and could be used to fill the shortfall and thereby achieve Congress' intent to replace high-GHG conventional fuels with low-GHG advanced biofuels and renewable fuels. Because EPA's interpretation contradicts Congress' express intent in creating the RFS2 program, it cannot stand either under a *Chevron* Step I or a *Chevron* Step II analysis.

UNICA therefore urges EPA to reject Option 3, which relies on this flawed interpretation of § 211(o)(7)(D)(i), and instead finalize Option 1, which appropriately focuses on advanced biofuel and renewable fuel availability as a basis for determining advanced biofuel and total renewable fuel volumes for 2014. UNICA notes EPA's concerns about the blendwall and that ethanol-based advanced biofuels may contribute to the blendwall issue. UNICA also notes, however, as it has previously, that in Brazil gasoline contains 25% ethanol, thus raising questions about whether the blendwall actually exists, and, if so, whether it exists at the level that the refining industry claims. The blendwall is, in any event, an issue that Congress must address through legislation. EPA may not take it upon itself to rewrite the express requirements of § 211(o) and reduce the required volumes of advanced biofuels and renewable fuels when Congress has directed to the contrary.⁴⁰

Even if the statute could bear an interpretation allowing EPA to reduce the volumes of advanced biofuels and total renewable fuels in the event of a cellulosic biofuel shortfall, notwithstanding the availability of advanced biofuels or renewable fuels to fill that shortfall, EPA's interpretation, which appears to go further still, fails for unreasonableness. Pointing to § 211(o)(7)(D)(i) language giving EPA authority, in the event of a cellulosic biofuel production shortfall, to "reduce the applicable volume of renewable fuel and advanced biofuels requirement," EPA posits that "this indicates a clear Congressional intention that under this provision EPA may reduce both the total renewable and advanced biofuel volume together, not one or the other."⁴¹ In short, in Option 3 of the NPRM, EPA may be contending that it has

³⁹ UNICA addresses EPA's assertions of authority under the general waiver provision (§ 211(o)(7)(A)), also cited by EPA as identifying factors that it may consider, in the next section of these comments. While EPA asserts that it may also consider "any other factors that may be relevant," EPA does not identify any such other factors in the NPRM.

⁴⁰ EPA has, in the past, instructed obligated parties that then-existing market limitations on ethanol were not grounds for waiving or ignoring the RFS2's express requirements. *See* 77 Fed. Reg. 70,752, 70,772-73 (Nov. 27, 2012) ("Ethanol has been the dominant domestic renewable fuel for several years, and during development of the law and regulations stakeholders in the fuel sector reasonably expected that ethanol would play a significant role in fulfilling the RFS volume requirements. . . . [I]f obligated parties choose to achieve their required RFS volumes using ethanol they should work with their partners in the vehicle and fuel market to overcome any market limitations on increasing the volume of ethanol that is used. Stakeholders in the refining sector have been aware of the E10 blendwall since passage of EISA in December of 2007.").

⁴¹ 78 Fed. Reg. at 71,755/1-2.

sufficient authority under the cellulosic waiver provision to allow it to reduce the required total volume of renewable fuel *by up to twice the amount* by which it reduces the required volume of cellulosic biofuels. Though the NPRM contains no analysis, and thus is not clear on this point, we are concerned that EPA may be reading the statute in this manner both because of the preamble language cited immediately above and because EPA proposes in Option 3 to reduce the total renewable fuel requirement, not by the same or a lesser volume than it proposes to reduce the volume of cellulosic biofuel for 2014, but by 1.21 billion gallons *more* than it proposes to reduce the cellulosic biofuel required volume. More specifically, UNICA is concerned that EPA may be reading the statute as if it automatically “passes through” any duly-promulgated reductions in cellulosic biofuel volumes to the categories of fuels in which the cellulosic biofuel subcategory is nested, first, by automatically reducing the advanced biofuels volume requirement—which, EPA might be suggesting, already has the effect of reducing the required volume of renewable fuel, since (as EPA notes) advanced biofuels are a nested subcategory within the total renewable fuel category—and then by *further and separately reducing* the total renewable fuel requirement by up to an equivalent volume (that is, by as much as another 1.73 billion gallons). Under this reading of § 211(o)(7)(D)(i), then, a 1.73 billion gallon projected shortfall in cellulosic biofuel production could authorize EPA to reduce overall renewable fuel volumes by as much as 3.46 billion gallons—1.73 billion gallons from the advanced fuel subcategory (which would then be reflected in the renewable fuel volume as a 1.73 billion gallon reduction), and by *another* 1.73 billion gallons from the renewable fuels category.

To the extent this reading of § 211(o)(7)(D)(i) is the basis for Option 3’s proposed 2.94 billion gallon reduction in total renewable fuel volume, it rests on a fatally flawed assumption: that cutting the required volume of cellulosic biofuel automatically results in a reduction of the required volume of advanced biofuels, and that a reduction in the volume of advanced biofuels automatically results in a reduction of the required volume of total renewable fuels. The text and structure of § 211(o)(7)(D)(i) belie that assumption. First, if the statute were to be interpreted in this way, the cellulosic waiver provision would be superfluous: shortfalls in cellulosic biofuel production would already be reflected in the advanced biofuel required volume and in the renewable fuel required volume, because the reductions would “pass through” to the parent categories; hence there would be no need for a provision allowing EPA, in appropriate circumstances, to reduce those required parental category volumes “by the same or a lesser volume,” as the reductions would already have been made. One fundamental principle of statutory interpretation is that readings such as this one, that render a provision superfluous, must be avoided.⁴² Second, even though cellulosic biofuel is a nested subcategory of advanced biofuels and advanced biofuel is a nested subcategory of renewable fuel, the RFS2 conspicuously sets out the required volumes of cellulosic biofuels, advanced biofuels, and renewable fuels as absolute numbers, independent of one another.⁴³ Third, the statutory definitions of cellulosic

⁴² See, e.g., *Corley v. United States*, 556 U.S. 303, 314 (2009) (“[O]ne of the most basic interpretive canons [is] that a ‘statute should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant.’”) (quoting *Hibbs v. Winn*, 542 U.S. 88, 101 (2004)); *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (“It is ‘a cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant.’”) (quoting *Duncan v. Walker*, 533 U.S. 167, 174 (2001)).

⁴³ See 42 U.S.C. § 7545(o)(2)(B) (setting out separately the requirements for total renewable fuel, advanced biofuels, cellulosic biofuel, and biomass-based diesel volumes). This is why the volumes are not cumulative in that section. In

biofuel, renewable fuel, and advanced biofuel are also distinct from each other.⁴⁴ By contrast, nothing in the statute so much as suggests that the required volume of renewable fuel in any way depends on the required volume of advanced biofuel, or that the required volume of advanced biofuel in any way depends on the required volume of cellulosic biofuel. For that reason, even if EPA has the authority, under the cellulosic waiver provision, to reduce the required volume of advanced biofuel by up to 1.73 billion gallons, and even if it can, under the same provision, reduce the renewable fuel volume requirement by up to 1.73 billion gallons, there is still absolutely no basis under that provision for EPA to cumulate those reductions in a way that reduces the total volume requirement for renewable fuels by more than 1.73 billion gallons.

At most, then, in the present circumstances § 211(o)(7)(D)(i) authorizes EPA to reduce the applicable volume of total renewable fuel by 1.73 billion gallons, as opposed to the 2.94 billion gallon reduction contemplated by the proposed rule. To EPA's point that the language of this provision indicates an intent that "EPA may reduce both the total renewable and advanced biofuel volume together, not one or the other,"⁴⁵ UNICA notes that the interpretation we posit here is also consistent with that intent, in that it allows EPA to reduce *both* the total renewable and advanced biofuel figures, as opposed to choosing one or the other, but at the same time is consonant with Congress' express purpose to promote the production and use of advanced biofuels and renewable fuels through increased annual required volumes of each.

In sum, the cellulosic waiver provision, standing alone, cannot authorize the 2.94 billion gallon reduction in the required volume of total renewable fuels that comprises EPA's preferred Option 3 in the NPRM.

B. Reductions under § 211(o)(7)(A)

Possibly because the cellulosic waiver provision cannot support EPA's proposed reductions in the required volumes of advanced biofuels and renewable fuels, EPA engages in some legal legerdemain, purporting to rely on a vague "combination of ... authorities" provided by § 211(o)(7)(D)(i) (the cellulosic biofuel waiver provision discussed above) and § 211(o)(7)(A) (the general waiver provision discussed in this section of these comments) to justify its proposed reductions in required volumes of advanced biofuels and total renewable fuels for 2014. As UNICA established in the previous section of these comments, the cellulosic biofuel waiver provision cannot justify the reductions EPA proposes in its favored Option 3. As we now explain, neither can the general waiver provision; that provision allows EPA to reduce the total renewable fuel requirement in two, and only two, circumstances: first, EPA may reduce the total renewable fuel volume requirement if it determines "that implementation of the

2022, for instance, the statutory volume of cellulosic biofuel (16b gal) plus the required volume of advanced biofuel (21b gal) plus the required volume of biomass-based diesel (>1.0b gal) adds up to *more than* the required volume of total renewable fuels (36b gal). If the volumes "passed through," one would expect the sum of the required volumes of each of the subcategories to be less than or equal to the required volume of total renewable fuels.

⁴⁴ Compare 42 U.S.C. § 7545(o)(1)(B) (defining "Advanced biofuel" to mean "renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions . . . that are at least 50 percent less than baseline lifecycle greenhouse gas emissions"), with 42 U.S.C. § 7545(o)(1)(J) (defining "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").

⁴⁵ 78 Fed. Reg. 71,732, 71,755/2 (Nov. 29, 2013).

requirement would severely harm the economy or environment of a State, a region, or the United States”; second, EPA may reduce the total renewable fuel volume requirement if it determines “that there is an inadequate domestic supply of renewable fuel.” Neither of these circumstances can possibly be said to apply for 2014. EPA has not even attempted to demonstrate that severe economic or environmental harm would result absent its proposed volume reductions, and thus § 211(o)(7)(A)(i) cannot justify the proposed reductions. EPA argues that its proposed reductions are justified instead on grounds of “inadequate domestic supply.” But the problem EPA seeks to address in the NPRM is not one of inadequate domestic supply of renewable fuels; there is in fact a surfeit of domestic renewable fuel, far more (according to EPA) than the market can bear. In short, there is plenty of supply; the problem is one of perceived inadequate demand. EPA proposes a reading of “inadequate domestic supply” that stands Adam Smith on his head and defines inadequate supply to mean inadequate demand. The statute—indeed, the science of economics itself—cannot bear that interpretation. The problem EPA has identified is one for Congress to fix. EPA cannot rewrite the statute to avoid what Congress has mandated.

1. Reducing the total renewable fuel volume requirement would not harm the economy or environment of a State, a region, or the United States.

Under § 211(o)(7)(A)(i), EPA may reduce the required volumes of renewable fuels if it finds that complying with the required volumes would “severely harm the economy or environment” of all or part of the United States.⁴⁶ Nothing in the NPRM, however, so much as suggests the possibility that complying with the CAA’s renewable energy requirements in 2014 would cause *any* economic or environmental harm, let alone *severe* economic or environmental harm. Quite the contrary, EPA has previously exalted the positive economic impact of advanced biofuels.⁴⁷

a. Complying with the CAA’s total renewable fuel volume requirements would not severely harm the environment.

Nowhere in the proposed rule does EPA aver or even purport to explain how implementing the applicable renewable fuel volume requirement would severely harm the environment of a State, a region, or the United States as a whole. Indeed, beyond a few mentions of the statutory text requiring such a demonstration, there is no discussion at all of whether any environmental harm would flow from finalizing or not finalizing the NPRM. This is not surprising, as scientists from around the world acknowledge that reducing the use of renewable fuels, including sugarcane ethanol—as EPA proposes in its favored Option 3—and concomitantly increasing the use of fossil fuels as a percentage of transportation fuels, will harm the environment in ways that may be irreparable.⁴⁸ UNICA notes again that one central purpose of the statutorily prescribed renewable fuel standards is to mitigate the environmental harms

⁴⁶ 42 U.S.C. § 7545(o)(7)(A)(i).

⁴⁷ 75 Fed. Reg. 14670, 14,834-52 (Mar. 26, 2010) (section of proposed rule on biofuel requirements entitled “Economic Impacts and Benefits”).

⁴⁸ See, e.g., Intergovernmental Panel on Climate Change, *Climate Change 2007 Synthesis Report: Summary for Policymakers*, at 5-8 (2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf (report produced by group of 1,300 independent scientific experts from countries around the world, concluding that there is more than a 90% probability that human burning of fossil fuels has been a major driver of global warming).

caused, in part, by America's overreliance on fossil fuels.⁴⁹ In Option 3 of the NPRM, EPA seriously undermines the environmental benefits of RFS2 by diminishing incentives for the use of clean, renewable fuels and making it easier for Americans to rely on the GHG-emitting fossil fuels the EISA sought to limit. In other words, it is Option 3 of the NPRM, not the RFS2 statutory standards, that threatens severe environmental harm in this instance. Consequently, EPA has not established any basis under the "severe environmental harm" prong of § 211(o)(7)(A)(i) for any reduction in the required volumes of renewable fuels for 2014.

b. Complying with the CAA's total renewable fuel volume requirements would not severely harm the economy.

Likewise, EPA has not demonstrated that the RFS2 renewable fuel volume requirement would cause severe economic harm. Indeed, as with the "severe environmental harm" prong, beyond a few references to the statutory language requiring a demonstration of severe economic harm, there is simply no discussion of the issue. Again, this is not surprising, as available evidence suggests precisely the opposite conclusion: that it is implementation of Option 3 that would cause substantial economic harm. A recent industry report noted that combined spending for biofuel operations, research, and agriculture added more than \$42 billion to the United States' gross domestic product and put an additional \$30 billion into the pockets of America's consumers.⁵⁰ If current production mandates are met, other studies suggest that almost 2 million biofuel-related jobs could be added across the United States within two decades.⁵¹ Far from facilitating economic development, reductions in the renewable fuel volume requirement would adversely affect whole sectors of the economy by, for example, driving refiners out of business and diminishing incentives for investment in renewable fuels.

Furthermore, cuts to the required volume of renewable fuels would dramatically depress prices for many commodities thereby directly harming America's farmers. Studies repeatedly show that biofuels production generates sizable agricultural and rural economic benefits by increasing demand for commodities like corn, sugar, soybeans, and sorghum.⁵² By contrast, retrenching from RFS2's volume requirements would cause significant hardship to growers—around the United States and around the world—who have relied on the statutory requirements in planning their crops for 2014. While EPA has gone to great lengths to calculate the additional, indirect emissions from increased production of biofuels (often referred to as Indirect Land Use Change, or iLUC, impacts), the NPRM ignores the negative economic consequences of abruptly

⁴⁹ See Pub. L. No. 110-140, 121 Stat. 1492, 1492 (2007) (providing that a purpose of the EISA was to "increase the production of clean renewable fuels").

⁵⁰ See John A. Urbanchuck, *Contribution of the Ethanol Industry to the Economy of the United States*, (Renewable Fuel Association Feb. 2, 2012), available at http://www.ethanol.org/pdf/contentmgmt/Contribution_of_the_Ethanol_Industry_to_the_Economy_of_the_United_States_2011-1.pdf; see also United States Department of Energy, Bioenergy Technologies Office, *Bioindustry Creates Green Jobs*, at 2 (Feb. 2013), available at http://www1.eere.energy.gov/library/pdfs/biomass_green_jobs_factsheet_2010_01.pdf (citing Urbanchuck article).

⁵¹ See, e.g., John M. Urbanchuck, LECG, LLC, *Economic Impact of the Energy Independence and Security Act of 2007* (Jan. 2008); BioEconomic Research Associates, *U.S. Economic Impact of Advanced Biofuels Production: Perspectives to 2030* (Feb. 2009), available at <http://www.bio.org/sites/default/files/EconomicImpactAdvancedBiofuels.pdf>.

⁵² See, e.g., Bruce A. Babcock, *High Crop Prices, Ethanol Mandates, and the Public Good: Do They Coexist?*, 13 IOWA AG REV., No. 2 (spring 2007).

reducing the production of biofuels, not just for the biofuels producers themselves, but for the broader global commodity industry. Those negative consequences will likely be severe, especially because, according to the USDA, up to 40% of the United States corn crop—which is the largest in the world—is used for ethanol production.⁵³

And that is to say nothing of the harm the proposed rule would inflict on States like California, with its Low Carbon Fuel Standard (“LCFS”). EPA acknowledges the connection between the RFS2 and the LCFS in the NPRM.⁵⁴ Under the LCFS, California rates sugarcane ethanol as the best-performing low-carbon fuel on the market today.⁵⁵ Indeed, sugarcane ethanol is among the principle commercial-scale ethanol fuels capable of meeting the LCFS’s lifecycle GHG emissions requirements.⁵⁶ For this reason, regardless of any cuts EPA makes to the total renewable fuel RVO or the advanced biofuel RVO, it is inevitable that sugarcane ethanol will continue to be a major renewable fuel source in States like California, which imported 90 million gallons of sugarcane ethanol in 2012 alone.⁵⁷ Reducing the RVO for renewable fuels and advanced biofuels will not change that outcome. It will, however, decrease nationwide demand for advanced ethanol biofuels, placing the burden of paying for such fuels exclusively on States like California, where sugarcane ethanol is an essential means of meeting the LCFS’s requirements. Far from alleviating severe economic harm, then, the proposed rule actually threatens economic harm for millions of Americans.

For those reasons, there is no foundation for any claim that reducing the renewable fuel volume requirement would alleviate substantial economic harm. Accordingly, EPA has not established any basis under the “severe economic harm” prong of § 211(o)(7)(A)(i) for any reduction in the required volumes of renewable fuels for 2014.

2. There is not an “inadequate domestic supply” of renewable fuel.

As a last measure EPA proposes, as another basis for its preferred Option 3, to reinvent economics by redefining the commonly accepted term “supply.” Under § 211(o)(7)(A)(ii), EPA

⁵³ See U.S. Dep’t of Agric. Econ. Research Serv., *Overview of U.S. Bioenergy Statistics* at T.6 (Jan. 15, 2014), available at <http://www.ers.usda.gov/data-products/us-bioenergy-statistics.aspx>.

⁵⁴ 78 Fed. Reg. 71,732, 71,772/1 (Nov. 29, 2013).

⁵⁵ 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 (last visited Jan. 23, 2014), 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 (January 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.”).

⁵⁶ Sonia Yeh & Julia Witcover, Univ. of Cal. Davis Inst. of Transp. Studies, *Status Review of California’s Low Carbon Fuel Standard*, at 4 (January 2014), available at http://www.its.ucdavis.edu/research/publications/publication-detail/?pub_id=2008 (sugarcane ethanol is the second most consumed biofuel under the LCFS).

⁵⁷ 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>.

may reduce the required volume of total renewable fuels if it finds that there is an “inadequate domestic supply” of renewable fuel.⁵⁸ This provision would seem inapplicable here, as EPA does not posit in the NPRM that American and foreign producers of advanced biofuels and renewable fuels are not producing enough renewable fuels to meet the statutorily-mandated volume requirements for 2014. There is thus more than adequate supply. What EPA argues, instead, is that motor vehicles in the United States may not be able to make use of the plentiful supply of advanced biofuel and renewable fuel that is both required by the RFS2 and readily available for use in the United States. In other words, EPA argues not that there is “inadequate domestic supply” but that there is inadequate domestic *demand*. As EPA states in the NPRM, “we interpret the term ‘inadequate domestic supply’ as it is used under the general waiver authority to include consideration of factors that affect *consumption* of renewable fuel.”⁵⁹ That argument is flawed because: (1) it conflates the phrase “inadequate domestic supply” with “inadequate domestic demand”; and (2) it undermines the technology-forcing purpose of the RFS2 program.

a. EPA’s argument misconstrues the phrase “inadequate domestic supply.”

EPA’s argument about the adequacy of domestic supply is not that too little renewable fuel is available in America, but that there is more than can be used. While a surplus of renewable fuel may be impractical or undesirable for some market participants (namely producers who will face lower prices), that does not make it “inadequate.” Supply of a good is only inadequate when there is *too little* of the good in question.⁶⁰ By definition, then, a surplus of a good can never be inadequate, since, with a surplus, there is *more* of the good than is required. Since EPA acknowledges that adherence to the RFS2 schedule would result in a surplus of renewable fuel, it simply cannot be the case that the schedule’s requirements would cause an “inadequate” supply of renewable fuel.

EPA’s real dispute, however, does not seem to be that the CAA’s requirements would lead to “inadequate” volumes of renewable fuel—at least not in the sense that there would be too little renewable fuel available to satisfy demand in the United States. Its 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. In other words, EPA believes the RFS2 would lead to “inadequate domestic supply” because some obligated parties might not want to use all of the renewable fuel mandated by the RFS2.

The most glaring problem with that argument is that it treats “supply” to mean “demand,” even though the two terms are inversely related. Indeed, nothing in the definitions of the two terms suggests they should be read to mean the same thing. Supply refers to the total amount of a specific good or service that is available to consumers.⁶¹ Demand, by contrast, refers to a consumer’s willingness or ability to purchase (or a market to absorb) a specific good at a specific

⁵⁸ 42 U.S.C. § 7545(o)(7)(A)(ii).

⁵⁹ 78 Fed. Reg. 71,732, 71,737/3 (Nov. 29, 2013) (emphasis added).

⁶⁰ AM. HERITAGE DICTIONARY 79 (2d college ed.) (defining “adequate” as “able to satisfy a requirement; suitable”).

⁶¹ *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”).

price.⁶² A fundamental principle of economics is that supply and demand are inversely related, so that, the greater the supply of a good, the lower the demand (i.e., the price) for that good.⁶³ 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 § 211(o)(7)(A)(ii). By any reasonable or common definition of supply, 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.⁶⁴ In this case, EPA acknowledges that there is more than enough renewable fuel available to meet the RFS2's requirements. By definition, then, there is no basis for EPA's concluding there is an "inadequate domestic supply."

EPA contends that the term "inadequate domestic supply" is employed in the general waiver provision "without further specification or clarification, thus providing EPA the discretion to determine whether the adequacy of the supply of renewable fuel can reasonably be judged in terms of availability for use by the ultimate consumer, including consideration of the capacity to distribute the product to the ultimate consumer."⁶⁵ 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."⁶⁶ 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)."⁶⁷ What EPA proposes in Option 3 is to reduce the required volume of *renewable fuel* (even though there is more than ample domestic supply) 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 § 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 § 211(m).⁶⁸ That section sets out requirements for supplying oxygenated fuels. Like § 211(o)(7)(A)(ii), it allows EPA to waive the volume requirements in certain circumstances. Unlike § 211(o)(7)(A)(ii), however, which speaks only of allowing reductions where there is "inadequate domestic supply," § 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.⁶⁹ Clearly,

⁶² *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").

⁶³ *See, e.g.*, GREGORY MANKIW, PRINCIPLES OF ECONOMICS 77-78 (Dryden Press 1998).

⁶⁴ *See* WEBSTER'S COLLEGE THESAURUS 15 (listing "sufficient" and "enough" as synonyms of "adequate").

⁶⁵ 78 Fed. Reg. at 71,756/3.

⁶⁶ 42 U.S.C. § 7545(o)(1)(J).

⁶⁷ *Id.* at § 7545(o)(1)(L).

⁶⁸ 42 U.S.C. § 7545(m).

⁶⁹ *Id.* at § 7545(m)(3)(c)(i) (emphasis added).

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.⁷⁰ If “domestic supply” had the meaning EPA gives it in the NPRM, the reference to “distribution capacity” in § 211(m)(3)(C) would be superfluous.⁷¹ But it is not superfluous because, as already noted, “domestic supply” is a concept distinct from demand or distribution capacity.

The EISA’s legislative history only reinforces that conclusion. Before finally adopting the EISA, Congress had before it two versions of that bill authorizing EPA to waive § 211(o)(2)(B)’s volumetric requirements when there was “inadequate domestic supply *or distribution capacity to meet the requirement[s]*.”⁷² 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 § 211(m)(3)(C). That record is undeniable proof that Congress did not want § 211(o)(2)(B)’s volumetric requirements to depend on factors like distribution capacity.

In § 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 substantial expansion of the Nation’s capacity to distribute such advanced fuels,⁷³ 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 cannot withstand scrutiny and does not provide a sound legal basis for reducing the required volume of total renewable fuel under the CAA.

b. EPA’s argument ignores the technology-forcing purpose of the RFS2.

A further problem with EPA’s argument about the adequacy of domestic supply is that it is entirely at odds with the technology-forcing purpose of Title II of the CAA, of which the RFS2 is a part.⁷⁴ The RFS2 was not intended simply to capture the demands or distribution capacities of existing markets. Its overarching purpose was to force the market to incorporate new technologies and means of distribution to meet the volumetric requirements set out in the CAA.⁷⁵

⁷⁰ 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).

⁷¹ 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”).

⁷² H.R. 6, 110th Cong. (2007); S. 606, 110th Cong. (2007).

⁷³ See *infra* at 19-21 (discussing the technology-forcing purposes of the RFS2 program).

⁷⁴ See, e.g., *Bluewater Network v. EPA*, 370 F.3d 1, 20 (D.C. Cir. 2004) (Title II of CAA is “technology-forcing”); *Sierra Club v. EPA*, 325 F.3d 374, 378 (D.C. Cir. 2003) (same).

⁷⁵ 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.

To read § 211(o)(7)(A)(ii) as allowing EPA to reduce volume requirements whenever the market is not pre-equipped to handle certain volumes of renewable fuels undermines the essential function of the RFS2 by making renewable fuel production contingent on whatever technologies are currently used to distribute and consume fuel. In the absence of a specific mandate to the contrary, it is irrational to read the RFS2 in a way that so totally confounds one of its fundamental purposes.⁷⁶

IV. Reducing the Required Volume of Advanced Biofuel is Contrary to the Policy of the RFS2.

Given the clear statutory limitations on EPA's ability to implement its proposed cuts in the required volume of total renewable fuels, EPA should reconsider its proposal to reduce the required volume of advanced biofuels by 1.55 billion gallons. In the NPRM, EPA proposes to require purchase or production of only 2.20 billion gallons of advanced biofuels, even though the statute specifies that 3.75 billion gallons shall be required for 2014. In light of both the RFS2's clear policy favoring advanced biofuels over fuels with higher GHG lifecycle emissions and the President's June 2013 Climate Action Plan,⁷⁷ which also expressly favors biofuels for the "role [they] play in increasing our energy security, fostering rural economic development, and reducing greenhouse gas emissions from the transportation sector,"⁷⁸ UNICA believes EPA's proposal is misguided.

As detailed above, 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.⁷⁹ Congress' preference for the production and use of advanced biofuels over other fuel sources was manifested, not just in statements made during passage of the RFS and RFS2, but in the structure of the RFS2 itself. Specifically, Congress (1) imposed a minimum volume requirement for advanced biofuels, and (2) mandated that, by no later than 2016, all increases in the RFS2 be met *exclusively* by using advanced biofuels.⁸⁰ 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 reduction in the required volume of advanced biofuels would defeat Congress' intent in passing the RFS2. Congress passed the RFS2 to ensure that advanced

Barton) ("We're mandating 35 billion gallons of alternative fuels that right now the technology simply doesn't exist.").

⁷⁶ *See id.*

⁷⁷ 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>.

⁷⁸ *Id.* at 8.

⁷⁹ *See, e.g.*, 153 Cong. Rec. H16659, 16742 (2007) (statement of Rep. Peterson) (noting that EISA "set[s] the stage for the next generation of ethanol, which is going to be cellulosic, and for new feedstocks for biodiesel"); 153 Cong. Rec. H16659, 16751 (2007) (statement of Rep. Stark) ("I hope that the environmental safeguards contained in the Renewable Fuel Standard—which mandates production of 36 billion gallons of biofuels by 2022—will quickly push production away from corn ethanol and toward advanced cellulosic fuels."); 153 Cong. Rec. H16659, 16751 (2007) (statement of Rep. Van Hollen) ("I am especially pleased that this RFS includes a substantial requirement for advanced biofuels from a variety of different feedstocks . . .").

⁸⁰ 42 U.S.C. §7545(o)(2)(B).

biofuels made up a greater share of America's fuel supply, but Option 3 of the proposed rule expressly reduces that share. Sugarcane ethanol is presently the largest, most commercially-viable source of advanced renewable fuels, yet the proposed rule completely ignores it when calculating required advanced biofuel volumes for 2014.⁸¹ And while Congress structured the EISA so that advanced biofuels would supplant conventional biofuels in the nation's fuel supply, the proposed rule incentivizes the purchase of less-eco-friendly conventional fuels and fossil fuels while concomitantly disincentivizing the purchase of cleaner, more efficient advanced biofuels such as sugarcane ethanol.

The proposed rule will inevitably have two 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. Those consequences amply demonstrate why and how Option 3 of the proposed rule does not and cannot 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 increases use of conventional biofuels at the expense of advanced biofuels such as sugarcane ethanol is fundamentally at odds with the environmental goals of the RFS2.

V. EPA Should Reconsider the Equivalence Values It Established in RFS1 and Adjust Them to Take into Account Lifecycle GHG Emissions as well as Energy Content.

In RFS1, EPA established Equivalence Values ("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."⁸² 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. Thus, butanol was assigned an EV of 1.3, mono alkyl ester biodiesel an EV of 1.5, and non-ester renewable diesel an EV of 1.7, all based on the energy content of these fuels compared to ethanol.⁸³ 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 the EPAct to effect that end.⁸⁴ In its 2010 RFS2 rule, EPA reevaluated but ultimately reaffirmed its choice to use these EVs in determining RFS compliance, finding that the same 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

⁸¹ See *supra* at 8-9.

⁸² 75 Fed. Reg. 14,670, 14,709/1 (March 26, 2010).

⁸³ *Id.* at 14,709/2.

⁸⁴ *Id.*

relative scarcity of renewable fuels meant that, even with the compliance preference given to 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, because of the blendwall issue that EPA has identified, the supply of renewable fuels exceeds the demand for those fuels.⁸⁵ 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 those 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 2014 NPRM: biodiesels have significantly higher lifecycle GHG emissions than sugarcane ethanol.⁸⁶ 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). Indeed, this is one of EPA's express goals in Option 3: to favor biodiesel and other non-ethanol advanced biofuels over sugarcane ethanol. In the present market, though, 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, in turn, 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. This result is 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, and if it intends to continue with EVs, revise 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 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% 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 Equivalence Value 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% 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% 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.

⁸⁵ See *supra* at pp. 17-19.

⁸⁶ 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.

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.

VI. Conclusion

For the reasons detailed above, UNICA urges EPA to reconsider its preference for Option 3 and that option's proposed cuts to the statutorily-required volumes of advanced biofuels and total renewable fuels. The cuts are unsound as a matter of law and ill-advised as a matter of policy. EPA should abandon them and, instead, implement the CAA's requirements for advanced biofuels and total renewable fuels as proposed in Option 1 of the NPRM. Doing so is the surest way to fully effectuate the language and unambiguous purposes of the RFS2, as well as President Obama's announced goals in his Climate Action Plan.

UNICA appreciates the opportunity to submit these comments and looks forward 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
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Leticia Phillips
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