# MAINTAIN AMERICAN ACCESS TO CLEAN, ADVANCED BIOFUELS

#### The Issue

Congress in 2007 significantly expanded a program requiring increasing volumes of renewable fuel in America's energy supply with the goal of improving energy security and reducing greenhouse gas emissions. The law - known as the Renewable Fuel Standard (RFS) – calls for Americans to use more renewable fuel each year, incrementally growing the requirement to 36 billion gallons by 2022. Congress capped conventional corn ethanol at 15 billion gallons to stimulate innovation and development of advanced biofuels that offer superior environmental benefits.

The U.S. Environmental Protection Agency (EPA) administers the RFS and determines which fuels qualify as advanced biofuels. The key condition for this designation is reducing lifecycle greenhouse gas emissions by at least 50% compared to fossil fuels. EPA identifies Brazilian sugarcane ethanol as an advanced biofuel because it reduces greenhouse gases by 61% compared to gasoline.

#### **Our Position**

While Brazilian sugarcane biofuel producers were disappointed that EPA recently reduced required volumes for advanced biofuels below Congressionally mandated levels, we were heartened to see growing requirements for advanced biofuels in 2016. This approach paves the way for continued American access to sugarcane ethanol, one of the cleanest and most commercially ready advanced biofuels available today.

This advanced biofuel from an American ally plays a modest but important role supplying the United States with clean renewable fuel. Over the past four years, nearly 1.2 billion gallons of sugarcane ethanol imported from Brazil flowed into American vehicles. During this time, sugarcane ethanol comprised only 2% of all renewable fuels consumed by Americans, but has provided one-tenth of the entire U.S. advanced biofuel supply.

Congress designed the RFS to stimulate renewable fuels like sugarcane ethanol that lower global emissions of heat-trapping greenhouse gases compared to gasoline and other fossil fuels. This advanced biofuel is a reliable option for diversifying energy supplies and improving U.S. energy security so Americans are not dependent on any one source or country. Americans deserve access to cleaner fuels, and Brazilian sugarcane producers support efforts by EPA and others to preserve a strong role for advanced and cellulosic biofuels under the RFS.



The FPA determined that sugarcane ethanol reduces greenhouse gases 61% compared to gasoline.

#### **Sugarcane Ethanol Plays a Modest but** Important Role Supplying U.S. with Clean **Renewable Fuel**

Renewable fuel consumption by Americans (2012 - 2015)





#### Background

As the world's largest ethanol producers and exporters, the United States and Brazil enjoy the benefits of trading renewable fuels. Together, the two countries have built a global biofuels market providing clean, affordable and sustainable solutions to our planet's growing energy needs.

Brazilian sugarcane producers are making investments to expand production, and Americans can depend on more advanced biofuel from sugarcane. Brazil currently produces more than seven billion gallons of sugarcane ethanol each year and typically makes between 4400 million and 800 million gallons of its annual production available for other countries to import. By 2020, Brazilian sugarcane producers and the California Air Resources Board estimate the U.S. may import between 850 million and 1.75 billion gallons of sugarcane ethanol to satisfy America's demand for low-carbon biofuels.

The benefits of using sugarcane ethanol are cleaner air and a healthier planet. Those benefits will grow as Americans consume more advanced biofuels.

#### **Sugarcane Ethanol Helps Create a Healthier, Cleaner Planet**

The one billion gallons of sugarcane ethanol Americans used since 2012 avoids 30 million tons of carbon dioxide emissions...



... the same reduction as planting 430 million native trees and growing them for 10 years.

Source: UNICA analysis of Environmental Protection Agency and International Trade Commission data

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#### **Global Ethanol Trade Benefits the** U.S. & Brazil

The United States and Brazil are the world's top two ethanol exporters (Annual average, 2012 - 2015)



Sources: SECEX, LMC International

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## **FREQUENTLY ASKED QUESTIONS**



#### What is sugarcane ethanol?

Ethanol is the general term for alcohol-based fuels produced by fermenting many different plants. Sugarcane ethanol is biofuel derived from sugarcane, a plant cultivated in the United States, Brazil and more than 100 other countries. This clean and affordable renewable fuel helps cut U.S. dependence on Middle East oil and improves the environment.

### Why would the United States want to use sugarcane ethanol?

**It's good for energy security.** Sugarcane ethanol is a reliable option for diversifying energy supplies and improving U.S. energy security so Americans are not dependent on any one source or country.

It's also good for the environment. Sugarcane ethanol emits significantly less heat-trapping greenhouse gases than gasoline and other types of ethanol. It is one of the few fuels designated by the U.S. EPA as an "advanced renewable fuel" because it reduces carbon dioxide emissions by more than 60 percent compared to gasoline on a full lifecycle basis.

### I don't have a car that runs on ethanol. Why should I care?

You probably put ethanol in your tank the last time you filled up at a gas station. Most gasoline sold in the United States today contains at least 10% ethanol, and vehicles built after 2001 can use gasoline containing up to 15% ethanol. American cars and trucks consumed more than 16 billion gallons of renewable fuel in 2015, making ethanol an important part of the U.S. fuel supply.

### What is America's current policy towards ethanol?

With the goal of improving U.S. energy security and reducing greenhouse gas emissions, Congress in 2007 significantly expanded a program requiring increasing volumes of renewable fuel in America's energy supply. The RFS calls for 36 billion gallons of renewable fuel by 2022. Congress capped conventional corn ethanol at 15 billion gallons to stimulate development of other advanced biofuels and provided the U.S. EPA significant flexibility to administer the RFS program. In 2015 EPA issued a final RFS rule for 2014-2016 maintaining the advanced biofuel standard for 2014 at a level reflecting actual production (2.7 billion gallons) and gradually increasing required volumes for 2015 (2.9 billion gallons) and 2016 (3.6 billion gallons) to reflect growing real-world supplies

### What's the difference between corn ethanol and sugarcane ethanol?

Ethanol is made by fermenting sugars. Most ethanol manufactured in the United States comes from corn, while Brazilian ethanol is made from sugarcane. Generally, ethanol produced from one crop or another has no chemical differences. However, starchy crops like corn must first be broken down into simple sugars before they can be used to produce ethanol (a two-step process). Since sugarcane produces these simple sugars naturally, the production process for sugarcane ethanol is more efficient (a one-step process) and creates important benefits compared to other plants.

### What does it mean to be an advanced biofuel?

Congress clearly intended for the expanded renewable fuels program to stimulate innovation and development of advanced biofuels that offer superior environmental benefits by capping conventional corn ethanol at 15 billion gallons. RFS volume requirements for this advanced category grow from one billion gallons in 2010 to 21 billion gallons by 2022. The U.S. EPA designates which renewable fuels qualify as advanced biofuels, and the key condition for designation is demonstrating lifecycle greenhouse gas reductions of at least 50% compared to gasoline. EPA identified Brazilian sugarcane ethanol as an advanced biofuel in 2010 after determining it reduces greenhouse gas emissions by 61%.

### Are there other advanced biofuels besides sugarcane ethanol?

Biodiesel and biofuels produced from cellulosic material (any plant fiber, including the non-starch parts of corn plants such as stalks and cobs) also qualify as advanced biofuels. The United States consumed more than 2 billion gallons of biodiesel in 2015, and several manufacturing sites designed for commercial production of cellulosic biofuels recently went online in the U.S. and Brazil. The U.S. EPA maintains a list of approved renewable fuel pathways that can be used to produce biofuels that qualify as advanced under the RFS.

# What about new studies questioning greenhouse gas reductions from sugarcane ethanol?

Brazilian sugarcane ethanol producers welcome and continue to support new scientific analyses of sugarcane, particularly lifecycle emissions. The U.S. EPA is a key arbiter on this topic and determined that sugarcane ethanol surpasses the 50% threshold for designation as an advanced renewable fuel. In fact, EPA concluded that emissions reductions from sugarcane ethanol exceed the higher 60% threshold for cellulosic biofuels.

#### How much sugarcane ethanol do Americans use? Can Brazil supply enough to meet our advanced biofuel needs?

Sugarcane ethanol plays a modest but important role supplying the United States with clean renewable fuel. Over the past four years, nearly 1.2 billion gallons of sugarcane biofuel imported from Brazil flowed into American vehicles. During this time, sugarcane ethanol comprised only 2% of all renewable fuel consumed by Americans, but provided one-tenth of the U.S. advanced biofuel supply.

In terms of future supply, Brazilian sugarcane producers are making investments to expand production, so Americans can depend on more advanced biofuel from sugarcane. Brazil currently produces more than seven billion gallons of sugarcane ethanol each year and typically makes between 400 million and 800 million gallons of its annual production available for other countries to import. By 2020, Brazilian sugarcane producers and the California Air Resources Board estimate that the U.S. may import between 850 million and 1.75 billion gallons of sugarcane ethanol to satisfy America's demand for low-carbon biofuels.

### Could sugarcane ethanol be produced in countries other than Brazil?

Sugarcane ethanol can potentially reshape global fuel markets. More than 100 countries grow sugarcane, and most could produce and use ethanol. According to the Food and Agriculture Organization of the United Nations, only 10% of the world's land available and suitable for cane production is actually used for sugarcane cultivation. Sugarcane-producing countries are typically tropical, developing countries that would benefit tremendously from this opportunity for significant economic development.

# What's your position on the EPA's revised renewable fuel standards volume obligations?

Brazilian sugarcane biofuel producers were heartened EPA's final RFS rule for 2014-2016 recognized growing supplies of advanced and cellulosic biofuels. While the final requirements are below the levels established by Congress in 2007, EPA has left the door open for increased American access to sugarcane ethanol, one of the cleanest and most commercially ready advanced biofuels available today.

Americans deserve access to cleaner fuels, and UNICA supports efforts by EPA and others to preserve a strong role for advanced and cellulosic biofuels under the RFS.

### What about new proposed requirements on foreign biofuels?

Brazilian sugarcane producers are concerned the regulatory process is being used to impose onerous, anti-competitive requirements on foreign biofuels. In comments submitted to the Environmental Protection Agency, we argued that EPA's proposed rulemaking is unnecessary and threatens American access to advanced biofuels - including sugarcane ethanol.

But don't just take our word for it. A growing chorus of biofuel proponents and stakeholders question the need for these changes and their practical impact, as shown in comments from Chevron, BP America, Shell, Advanced Biofuel Association, Independent Fuel Terminal Operators Association, American Fuel & Petrochemical Manufacturers, American Petroleum Institute, and Adecoagro, one of South America's leading renewable energy companies.

EPA's intentions are laudable, and we support the agency's goal of ensuring the regulatory system tracking American biofuel consumption (known as Renewable Identification Numbers or RINs) is accurate. But the current system monitoring foreign producers isn't broken. Significant protections already guard against RIN concerns, and the Brazilian sugarcane industry worked proactively with EPA to ensure Brazilian producers maintain appropriate records. Plus, there has never been an instance of RIN fraud linked to Brazil. In the past, proposed changes have appeared to be a solution in search of a problem that threatens American access to one of the few advanced biofuels on the market today.



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