

A Special Report Prepared By The Washington Times Special Sections Department

# Good intentions gone wrong:

# **Can Congress admit a mistake?**

In the 12th century, Saint Bernard of Clairvaux is said to have coined the phrase, "The road to hell is paved with good intentions." In the 21st century, the same apparently holds true for well-intended legislation.

In 2005 and again in more detail in 2007, the U.S. Congress passed the Renewable Fuel Standard (RFS). It dictated that up to 10% of the fuel you pump into your car at the local convenience store would be made from corn ethanol. At the time, the program's intentions were tough to argue with. Corn ethanol in fuel would be "green," that is, better for the environment. It would reduce U.S. reliance on foreign oil. The RFS would plant the seeds for a farm program that would soon become self-sustaining and boost our overall economy.

In order to make sure there were no unintended consequences, a series of studies and reports were to be produced every couple of years to measure the economic, environmental and agricultural impacts. This regular, required reporting was to monitor the RFS program and make course corrections as necessary.

Unfortunately, none of the promises of the RFS program came to fruition. This well-intentioned idea turned out not to be renewable at all. In fact, producing the corn ethanol to go into our fuel supply actually caused a greater carbon footprint than simply using the standard fuel mix of the past. Additionally, once the government expanded the demand for corn, millions of more acres were converted into corn production. Corn crops have a far greater negative impact on our water, soil and air quality than most, and the environmental damage has been overwhelming. So much for the "green" argument.

The damage the RFS caused has not been limited to the environment, however. Small engines such as lawn mowers, motorcycles, marine engines and snowmobiles were not designed for corn ethanol fuel. Its nearly exclusive availability at the gas pump significantly increased damage to them and dramatically decreased their life spans.

One of the hardest-hitting consequences of the RFS — higher food costs — is felt by every living human. Increasing prices on corn hit livestock farmers hard, driving up the cost of feed. As a result, poultry became more expensive, beef products became pricier, the cost of eggs jumped. In fact, nearly every food in your grocery store or on your restaurant menu uses corn starch, corn syrup or some other variation of corn product. When the RFS drove up the price of corn, it drove up your grocery and restaurant bill. This well-intentioned program made it more expensive to eat.

One of the promises of the corn ethanol program was that it would kickstart an agricultural product that would rapidly become self-sustaining. Except it hasn't. Senators from farm states are loudly protesting any proposed change to the RFS because without taxpayer support and mandates of Congress, they aren't so sure this program will continue. So much for self-sustaining.

What about those environmental, economic and agricultural reports? For the most part, deadlines have been ignored by the government agencies, and even the failures reported by those agencies who did get around to fulfilling their required reports have resulted in no meaningful change.

Perhaps most telling of all is the long list of some of the RFS' biggest supporters who are now vocal opponents of the program. Even former members of Congress who promoted the idea are publicly calling for its sunset as a failed program.

In the pages that follow, you'll find the story of a well-intentioned program that has become a colossal flop. Other than those that stand to financially benefit from it, there is no one left supporting the Renewable Fuel Standard. In a true test of our U.S. Congress, one must ask if they will acknowledge that the facts clearly show a failure — and take appropriate action.

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### **By Washington Times Staff**

ive months into the Obama administration, the Environmental Protection Agency was supposed to complete a study looking at ethanol's effect on American air quality.

More than eight years later, the agency is finally showing some work. In their new, 145-page report, "Biofuels and the Environment: The Second Triennial Report to Congress," the EPA repeatedly acknowledges that the Renewable Fuel Standard (RFS) — the federal law that requires the blending of ethanol with gasoline supplies each year — has done harm to water, soil and air quality.

The National Wildlife Federation (NWF) indicates the June report documents millions of acres of wildlife habitat lost to ethanol crop production and increased nutrient pollution in waterways and air emissions. They also say the report supports their belief that the unintended consequences of replacing gas with ethanol are making things much worse.

The RFS is having negative consequences to a wide variety of environmental indicators, according to David DeGennaro, a policy expert at NWF. "The report is a red flag warning that we need to reconsider the mandate's scope and its focus on first-generation fuels made from food crops," he said.

More than eight years later, the agency is finally showing some work. In their new, 145-page report, "Biofuels and the Environment: The **Second Triennial Report** to Congress," the EPA repeatedly acknowledges that the Renewable Fuel Standard (RFS) — the federal law that requires the blending of ethanol with gasoline supplies each year - has done harm to water, soil and air quality.

The years-long reporting delay came into the spotlight last year when Sen. John Barrasso, Wyoming Republican and chairman of the Senate Environment and Public Works Committee, sent a letter to then-EPA Administrator Scott Pruitt urging him to comply with federal law and complete the report. His letter came just days after the EPA issued new requirements for the blending of ethanol with gasoline, largely siding with the biofuels industry and

rebuffing critics
— including Mr. Barrasso — who argued the ethanol mandate should be reduced dramatically.

"A growing body of independent academic research has also documented the RFS' impacts on air, water and land quality, wildlife habitat, and other sensitive ecosystems," the senator wrote. "EPA cannot ignore the will of Congress and the requirements of the Clean Air Act" by not completing the report.

The study is supposed to be completed every three years, but the EPA had issued it only once before, in 2011. The separate air quality study was due to be completed by May 19, 2009.

The two studies are just one part of a much broader fight that's now become an intraparty war between Republicans. President Trump has been an outspoken supporter of the RFS, a position shared by Sen. Chuck Grassley, Iowa Republican, and other members of the GOP from states that have benefited greatly from the domestic ethanol sector.

On the other side, Mr. Barrasso, Texas Sen. Ted Cruz, and others have pressured the administration to slash the RFS, arguing, among other things, that it has an adverse impact on the oil and gas industry.

In his letter, Mr. Barrasso didn't explicitly cite air quality concerns as a potential reason why the RFS should be reduced. But it's clear that a study showing biofuels have a negative impact on air provides serious ammunition for his side of the debate.



, SPECIAL REPORT PREPARED BY THE WASHINGTON TIMES SPECIAL SECTIONS DEPARTMENT  $\mid$  WEDNESDAY • SEPTEMBER 5 • 2018

ILLUSTRATION BY HUNTER



# Biofuels mandate fueling wildlife crisis



### By Collin O'Mara

ost habitat. Polluted waters.
Less wildlife. These are all
unintended consequences of
the broken ethanol mandate.
Let's start with a confession: More than 10 years
ago, the National Wildlife Federation supported passage of the federal
Renewable Fuel Standard (RFS). We
agreed with the aspiration to develop
cleaner, more sustainable fuels to

The enormous dead zone in the Gulf of Mexico fed by agricultural runoff, which reached an all-time high last year, costs seafood and tourism industries at least \$82 million per year.

help the country gain energy independence while promoting a healthier environment. We were promised that no habitat would be lost, that the RFS would accelerate development of truly advanced, low-emission biofuels, and that the program would be halted if adverse impacts occurred. Every one of those promises has been broken, repeatedly.

Since 2007, the ethanol mandate has fueled the destruction of more than 7 million acres of habitat, harming wildlife as well as hunting, fishing, and wildlife-viewing opportunities. Some of the greatest impacts have occurred in the Prairie Pothole region of the Dakotas and Minnesota — the main breeding grounds for ducks and waterfowl in the United States. The program is accelerating the

decimation of the American prairie — less than 10 percent of this vanishing habitat remains — which is contributing to the steep decline of many species of grassland-dependent wildlife, including bee colonies that pollinate crops accounting for a third of our nation's food supply.

The massive conversion of wildlife habitat to row crop agriculture — and resulting increase in farm runoff — is contributing to toxic algal outbreaks around the country that poison drinking water, hurt small businesses, curtail outdoor recreation, and raise utility costs. The enormous dead zone in the Gulf of Mexico fed by agricultural runoff, which reached an all-time high last year, costs seafood and tourism industries at least \$82 million per year.

The National Wildlife Federation

supports bipartisan, common-sense reforms that support family farmers and advance clean fuels while protecting public health and our natural resources. We support reducing the current corn ethanol mandate; promoting cleaner, more sustainable biofuels (other than those from food crops like corn and soy); halting habitat destruction (as required by law); and, funding habitat restoration and conservation to mitigate the damage already done. These solutions, and others, are in the Growing Renewable Energy through Existing and New Environmentally Responsible (GREENER) Fuels Act (S. 2519 and H.R. 5212).

Ten years ago, we failed to anticipate the unintended consequences of this ill-conceived government mandate. Today, we know better. We urge Congress to reform nation's biofuel policy and protect our drinking water, wildlife habitat, and public health.

Collin O'Mara is president and CEO of the National Wildlife Federation. Please follow @NWF.

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# Environmental groups back Ted Cruz, Republicans on overhaul of Renewable Fuel Standard

# Green organizations urge end to corn ethanol mandate

By BEN WOLFGANG

THE WASHINGTON TIMES

Green groups were among the loudest champions for the federal government's sweeping ethanol mandate a decade ago, touting it as a near-magic fuel that could help ease a climate crisis.

But the Renewable Fuel Standard (RFS) that boosted ethanol use has fallen out of favor so badly that environmentalists now see themselves on the same side of the debate as Republicans such as Sen. Ted Cruz, arguing that the entire program is deeply flawed and must be completely overhauled.

The intense opposition to the RFS from environmental and conservation groups comes as the White House and congressional leaders work to craft the most serious reforms the program has seen since it was established more than 10 years ago. As Republicans and oil-industry groups bemoan the RFS as a job killer in the oil refining sector, environmentalists say their once-high hopes that ethanol could reduce carbon emissions, preserve land and help fight climate change have been proven wrong.

"The road to hell is paved with good intentions," said Collin O'Mara, CEO of the National Wildlife Federation, a group that was once a vocal supporter of the RFS but now has become one of its chief opponents. "There's a reason why [the RFS] was bipartisan, but the problem is that the law hasn't been followed ... We've distorted both our energy policy and our natural resources. That absolutely could've been avoided."

Mr. O'Mara and other critics cite the fact that the RFS has mostly fueled wild growth in traditional corn-based ethanol, while the so-called "next generation" of biofuels — such as cellulosic ethanol — haven't grown at nearly the same rate. Indeed, while the Environmental Protection Agency during the Trump administration has held steady the amount of corn-based ethanol that must be blended with gasoline each year, it's reduced the mandated amount of advanced biofuels blending.

[Former] EPA Administrator Scott Pruitt last year said that was due to "market realities" that have shown it's been harder to bring advanced biofuels, which are generally considered cleaner, into the marketplace than initially thought.

Many green groups have lined up behind legislation proposed by Sen. Tom Udall, New Mexico Democrat, and Rep. Peter Welch, Vermont Democrat, that would phase out the corn ethanol mandate portion of the RFS and reform the entire



program into one focused on promoting advanced biofuels.

"Our bill is a forward-looking proposal, offering visionary reforms to put us on a cleaner and more sustainable path. The changes it would make represent a giant step forward to combat the urgent threat of climate change, cut pollution, and protect our planet for future generations," Mr. Udall said in March.

The most ardent supporters of cellulosic ethanol and other advanced biofuels, however, contend that environmental groups have essentially partnered with the oil industry in an effort to undermine the future of ethanol, and that the Democratic legislation would be disastrous.

"When oil companies try to ghost write legislation for environmental front groups, you end up with some pretty backwards ideas, and that's exactly what this appears to be. It's dead on arrival with any law-maker who cares about the climate, energy security, or the farm economy," said Emily Skor, the CEO of Growth Energy, which represents biofuels producers.

Indeed, it appears unlikely the Udall-Welch bill will gain much traction in Congress. Sen. John Cornyn, Texas Republican, reportedly is crafting his own RFS reform package, and that's more likely to attract support in the Republican-controlled Senate.

For the National Wildlife Federation and others, initial support for the RFS was based on the idea that corn ethanol would

be little more than a stopgap as the next wave of biofuels were developed and put into widespread use. Their opposition, along with that of Mr. Udall and other RFS critics in Congress, stems from the fact that the next wave simply hasn't come to pass, and they believe that a major overhaul of the RFS is now the only way to accomplish that long-term goal.

"A lot of folks on the Democratic side thought that by mandating more of the conventional food-based ethanols ... that those would be a bridge to the second generation biofuels, but that clearly hasn't happened," said Rose Garr, campaign director at the environmental group Mighty Earth. "A lot of the climate benefits and carbon reductions were supposed to come from those fuels, and they just haven't come online."

The National Wildlife Federation contends, among other things, that the conversion of huge tracts of land into corn fields produces massive amounts of carbon emissions. More broadly, critics argue that the ethanol mandate promotes the continued use of fossil fuels at a time when the nation's motor vehicle sector and other areas of the economy should be moving toward cleaner energy.

Green groups also say the creation of more corn fields has disrupted habitats and led to other serious conservation issues.

There's conflicting information as to the true effect of ethanol on carbon emissions and, by extension, on climate change. While some studies have indeed shown that ethanol production can drive up carbon emissions, other research — such as a January 2017 study from the federal Agriculture Department — found that ethanol greenhouse gas emissions are 43 percent lower than gasoline, meaning that incorporating ethanol into the gas supply results in fewer emissions overall.

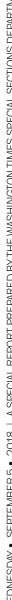
RFS opponents dispute that report, and the EPA hasn't yet followed through on congressional mandates that it thoroughly study ethanol's effects on the environment.

All sides of the debate, from lawmakers to the ethanol industry, have urged the EPA to complete its work.

Meanwhile, the ethanol industry — led by its largest trade group, the Renewable Fuels Association — counters that the overall land dedicated to growing corn has dropped since 2007, and that overall emissions in the transportation sector continue to decline.

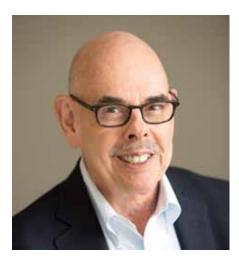
Industry leaders also reject any reductions to the RFS, saying instead the program should be expanded and more ethanol allowed into the marketplace.

"We must change the narrative about renewable fuels so they are not viewed with cynicism and derision by key influencers and decision-makers," Renewable Fuels Association President Bob Dinneen said in a recent speech. "We need to understand there's another team on the field spinning their own anti-ethanol narrative."





# Fixing past missteps on biofuels



By Hon. Henry Waxman

or 40 years, I championed environmental protections and solutions to climate change in Congress. I'm proud of my work to strengthen the Clean Air Act, make drinking water safer, reduce pesticides in food, and cut oil consumption through strong fuel efficiency standards.

Unfortunately, one piece of legislation that I supported in 2007, the Renewable Fuel Standard (RFS), has not stood the test of time. The RFS had admirable environmental goals. It was

aimed at driving a transition to more environmentally friendly transportation fuel and reducing climate pollution. Although it included huge mandates for consumption of food-based fuels that were worrisome at the time, these fuels were sold as a bridge to the production of non-food-based, ultra-low carbon fuels, such as cellulosic ethanol and

impact of the program through a series of white papers.

"Burned," the report issued earlier this year by Mighty Earth and Action Aid USA, provides a dramatic on-theground glimpse of the unintended negative consequences of food-based biofuels. It shows that instead of driving large-scale climate solutions, the RFS

**Biofuels production is driving the destruction** of wildlife habitat around the world, impacting jaguars in South America, orangutans in Asia, and monarch butterflies in the United States. In part due to expanded biofuel production, last year saw the largest-ever dead zone in the Gulf of Mexico.

other truly advanced fuels.

However, while I was still in Congress, an array of peer-reviewed scientific research suggested that food-based biofuels' climate and environmental impact was as bad or worse than the oil it was meant to replace. In addition, the production of truly advanced, cellulosic fuels failed to materialize. As Ranking Member of the House Energy and Commerce Committee, we worked in a bipartisan fashion to evaluate the

has largely served as a mandate for corn ethanol and food-based biodiesel production, including soy and palm biodiesel produced overseas.

Biofuels production is driving the destruction of wildlife habitat around the world, impacting jaguars in South America, orangutans in Asia, and monarch butterflies in the United States. In part due to expanded biofuel production, last year saw the largest-ever dead zone in the Gulf of Mexico. These biofuels have no carbon emissions benefits and are likely worsening our climate crisis.

It's time to admit that the RFS has fallen far short of its goals. There is no room in any true clean energy policy for large amounts of food-based biofuels. And while cellulosic biofuels and other truly advanced fuels still offer promise, these better biofuels need new and additional support.

Fortunately, some in Congress are already leading. The GREENER Fuels Act, introduced by New Mexico Sen. Tom Udall and Vermont Rep. Peter Welch, lays out a pro-environment path forward for biofuels.

The RFS has long been seen as a struggle between Big Oil and Big Corn. It is time for pro-environment policymakers to engage in favor of reforms that support and prioritize better biofuels and also reduce the harm caused by corn ethanol and soy and palm biodiesel.

Henry Waxman is a former congressman from California and chairman of the House Energy and Commerce Committee. He currently leads the environmental group, Mighty Earth. Please follow @StandMighty.



# RFS reform outlined in Welch, Udall bills

# By The Washington Times Special Sections Department

Unprecedented bicameral legislation seeks to reform the nation's fuel standard by reducing corn ethanol in gasoline, stepping up pursuit of "next generation" biofuels and returning some U.S. cropland back to natural wildlife habitat.

The Renewable Fuel Standard (RFS) "has been a well-intentioned flop that is harming our environment by contributing to the conversion of millions of acres of grasslands, wetlands and forests into crop production while failing to bring about the widespread use of truly sustainable fuels like cellulosic," said Rep. Peter Welch, Vermont Republican and lead sponsor of the GREENER Fuels Act (Growing Renewable Energy through Existing and New Environmentally Responsible Fuels Act) in the House.

"Our commonsense legislation reforms the mandate to dramatically reduce its environmental impact and to support the continued growth of advanced biofuels," said Mr. Welch.

Sen. Tom Udall, New Mexico Democrat, is sponsor of the companion bill in the Senate.

"The RFS was a well-intentioned idea that has delivered as intended for the conventional ethanol industry, which is now mature and well-established. But the promised environmental benefits have yet to be realized. In fact, the standard that was intended to benefit the environment may well be hurting it," Mr. Udall said. "Our bill is a forward-looking proposal, offering visionary reforms to put us on a cleaner and more sustainable path. The changes it would make represent a giant step forward to combat the urgent threat of climate change, cut pollution, and protect our planet for future generations."



High ethanol levels in gasoline can also clog fuel lines and otherwise damage small engines, such as those in motorcycles, boat motors, lawn mowers and snowmobiles.

In January, Mr. Welch and members of the Vermont Association of Snow Travelers took a 30-minute snowmobile ride to highlight the need to eliminate ethanol from gasoline.

The RFS "was intended to grow corn, turn that into ethanol and have it be a clean fuel," Mr. Welch told reporters, including Vermont Public Radio. "It's turned out to be a well-intended flop."

The Welch/Udall bills, H.R. 5212 and S. 2519, are the first to overhaul the RFS. They are supported by Harry Waxman, former chairman of the House Energy and Commerce Committee; the National Wildlife Federation, led by Collin O'Hara; and the Sierra Club National Campaign, led by Debbie Sease.

According to Mr. Welch's office, these bills would:

First, phase out the corn ethanol mandate and immediately reduce the amount of ethanol in fuel by as much as 1 billion gallons by capping the amount of ethanol that can be blended into conventional gasoline at 9.7 percent.



Second, help farmers return cornfields to pasture and wildlife habitat through a 10 cents-per-Renewable Identification Number (RIN) fee to fund a new Private Land Protection and Restoration Fund in the U.S. Treasury.

The fund will help pay for Department of Interior programs that:

- pay for easements on private lands to keep them out of agricultural production;
- keep the lands in conservation uses like grass, forest, stream buffers, or pollinator habitat and;
- help farmers transition land currently in crop production into other uses.

Third, extend the cellulosic next generation biofuel mandate until 2 billion gallons of annual production is achieved or 2037, whichever is soonest, and improve the way the mandate is implemented to produce liquid transportation fuels that dramatically reduce greenhouse gas emissions.

"It's time to admit that the Renewable Fuel Standard has done more harm than good and start supporting sensible fixes," Mr. Waxman said when the Welch/Udall bills were introduced in March.

"Like many of my colleagues, I

supported the admirable environmental goals of the RFS when we created it 10 years ago. Now, it's clear that the RFS has been a net-negative for the environment. Not only has the RFS failed to spur significant development of truly advanced fuels, but conventional biofuels like corn ethanol and soy biodiesel are destroying wildlife habitat at home and abroad, polluting waterways, and increasing global warming pollution," said Mr. Waxman, who is chairman of Mighty Earth, a global campaign to protect rainforests and other threatened landscapes.

Mr. O'Mara of NWF said, "This critical legislation offers common-sense solutions that protect wildlife, drinking water, and public health, while supporting family farms and putting the nation on track to meet its clean fuel goals the right way."

"We thank Rep. Welch and Sen. Udall for their tireless leadership working to reverse the massive grassland losses and growing algal blooms exacerbated by the ethanol mandate-while also moving America toward cleaner, more sustainable fuels," he said. "We urge the full House and Senate to pass these bills, before the impacts to America's wildlife and waterbodies become worse and more costly to solve."

"The Sierra Club applauds Senator Udall, Congressman Welch, and all the members of Congress who are putting common sense first rather than continuing to permit a dirty and destructive policy to remain intact," said Michael Brune, executive director of the Sierra Club. "Instead of continuing to play political games with our environment and public health, these legislators are moving policies that will help undo the damage caused by the ethanol mandate. We urge Congress to pass this legislation immediately rather than continuing to push false theories about ethanol."



# RFS reform: One of few issues with bipartisan support

**By Members of Congress** 



# Sen. Dianne Feinstein (D-CA)

"The federal mandate for corn ethanol is both unwise and unworkable. Roughly 40 percent of corn in the United States is currently used for fuel, which increases the price of food and animal feed while also damaging the environment. Additionally, oil companies are unable to blend more corn ethanol into gasoline without causing problems for some gas stations and older automobiles.

"Once we remove the corn ethanol mandate, the RFS program can finally

serve its intended purpose: to support the development of advanced, environmentally friendly biofuels like biodiesel, cellulosic ethanol and other revolutionary fuels."

### Sen. Bill Cassidy (R-LA

"The RFS is outdated. It was created in 2005, a time when American energy consumption relied heavily on foreign imports. It was thought that the Renewable Fuel Standard would be good for our environment by decreasing the carbon footprint. But in the last 10 years, our energy landscape has changed dramatically. We now have more domestic oil than almost ever before, and the drawbacks of the RFS greatly outweigh its benefits.

"The Congressional Budget Office projects that Americans will be forced to pay 13 to 26 cents more per gallon if the RFS is not repealed. For a mom and dad with two teenagers, this would be about \$400 a year. But it doesn't stop at the pump. Over the last 10 years, the price of corn has drastically fluctuated. Corn costs have approximately doubled since the RFS began. And the corn price increasing has increased the cost of food. As much as 7 percent to 26 percent is estimated per year, and it also raises costs all the way down. For example, chain



restaurants are estimated to spend \$3.2 billion more for the food they purchase and serve to their customers because of the RFS.

"Unfortunately, there are no environmental benefits, but there is tremendous environmental harm. An increase in corn production means there is an increase in fertilizer use across the Midwest. That fertilizer runs off into the rivers, goes down into the Mississippi River, hits the Gulf of Mexico, causes algae blooms because of the high nitrogen and phosphorous, and that decreases the oxygen in the water, devastating the fish population. If you look at maps of the dead zone, it has continuously increased in size since the RFS was put into law."

# Sen. Tom Udall (D-NM)

"The RFS was a well-intentioned idea that has delivered as intended for the conventional ethanol industry, which is now mature and well-established. But the promised environmental benefits have yet to be realized. In fact, the standard that was intended to benefit the environment may well be hurting it. Our bill is a forward-looking proposal, offering visionary reforms to put us on a cleaner and more sustainable path. The changes



# **CONGRESS**

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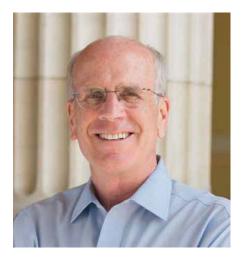
it would make represent a giant step forward to combat the urgent threat of climate change, cut pollution, and protect our planet for future generations."

# Sen. Pat Toomey (R-PA)

"The biofuel use requirements have a negative effect on our economy. Not only does the mandate likely harm our car engines, it drives up farmers' and ranchers' costs and causes increased prices in almost everything we buy in the grocery store. Current rules require refiners to blend increasing amounts of



biofuels — especially corn ethanol into the nation's gasoline supply. The result is that corn prices have shot up, and this is troubling for Pennsylvania livestock farmers who devote about half their operating costs to feed. I have heard first-hand from many constituents just how damaging this policy has been. And it is particularly harmful to lower-income families who spend a greater percentage of their paycheck on groceries. It is ill-advised and unsustainable."



# Rep. Peter Welch (D-VT)

"Despite its early promise, the RFS has been a well-intentioned flop that is harming our environment by contributing to the conversion of millions of acres of grasslands, wetlands and forests into crop production while failing to bring about the widespread use of truly sustainable fuels like cellulosic. Our commonsense legislation reforms the mandate to dramatically reduce its environmental impact and to support the continued growth of advanced biofuels."

### Rep. Bob Goodlatte (R-VA)

"Forcing more ethanol into the market while hurting consumers, food producers, and small engines across the nation is not the solution. While well-intentioned, it has been clear for some time now that the RFS is a broken policy. The EPA's action today ignores basic economic and scientific facts, and sets the industry on a path that will be disastrous for families, small businesses and retailers, the agriculture community, food aid organizations, and the environment. Announcing higher fuel volumes for 2017 only emphasizes the unfairness of this mandate, and the need for Congress to step in and stop the harmful impacts. There are several good solutions on the table in the House to help lessen the effects of the ethanol mandate, including



the RFS Reform Act, which we have introduced. Reforming the RFS remains a priority, and we will continue working to see a legislative fix move forward in Congress."

### Rep. Jim Costa (D-CA)

"The Renewable Fuel Standard (RFS) is a well-intentioned policy that Congress passed in 2005. Unfortunately, with its passage came unintended consequences, which are negatively impacting American industries, including agriculture, manufacturing, and food service. The RFS is no longer sustainable as currently implemented. As the United States and the rest of the world continue to update our energy and transportation policies for the 21st century, Congress must work together on



a bipartisan basis ... because it is an important step to bringing more certainty to the marketplace for transportation fuels."

## **Rep. Bill Flores (R-TX)**

"In today's market, the RFS is hurting consumer choices and increasing food and fuel costs for our families. Market conditions have dramatically changed since 2005 and 2007 when Congress created and subsequently expanded the RFS. Since that time, gasoline demand has fallen and is well below the volumes implied by the ethanol mandates in the 2007 statute. As a result, the legacy RFS formula has now caused a situation where the ethanol mandate exceeds the maximum amount of ethanol



that can be efficiently blended into gasoline under real-world market conditions and forces refiners to increase ethanol volumes above 10 percent of total gasoline production. Higher ethanol blends of this nature are harmful for small engines, engines for recreational vehicles and older vehicle engines. Furthermore, the current RFS mandates are causing higher emissions as well as higher fuel and food costs for consumers."







# Cruz battles ethanol industry over national biofuels mandate

### By Washington Times Staff

Sen. Ted Cruz has emerged as Washington's leading critic of the ethanol industry, holding up federal nominees over his opposition to the national biofuels mandate, lambasting the sector in fiery Senate floor speeches, and leading a coalition of oilfriendly lawmakers to the Oval Office in hopes of weakening the Renewable Fuel Standard.

Mr. Cruz has, for all intents and purposes, become public enemy No. 1 for an ethanol industry that has engaged the senator in a heated war of words over the future of the fuel. Bob Dinneen, president of the Renewable Fuels Association, the sector's largest trade group, blasted Mr. Cruz in a 2018 op-ed in the San Antonio Express-News, taking the fight to the senator in the pages of a leading Texas newspaper.

"Cruz needs to stop scapegoating the RFS because a few refiners don't like the program. Renewable fuels like ethanol are not the enemy. Indeed, renewable fuels hold the key to a more sustainable energy future that will provide consumers with both choice and savings at the pump," wrote Mr. Dinneen.

At the heart of Mr. Cruz's objections to the biofuels sector is the damaging effect he says it's having on oil-and-gas refiners, some of which say they're heading toward

financial ruin because of the federal ethanol mandate, commonly known as the RFS.

Mr. Cruz cited the recent bankruptcy of a Philadelphia oil refinery as an example of the problems with the RFS, and suggested that refineries in his home state of Texas — the oil-and-gas capital of the country — could be next...

Iowa has benefited more than any other state from the RFS, which requires the blending of ethanol with gasoline. Iowa farmers grow much of the corn needed to

rumor that the RFS has caused an oil refinerv in Pennsylvania to file for bankruptcy. This example has been cited repeatedly as a justification for forcing RFS supporters to agree to sudden and drastic changes in how the RFS was designed," Mr. Grassley has said on the Senate floor.

The Philadelphia refinery says it went bankrupt because of the high cost of Renewable Identification Numbers, which are assigned to each gallon of gasoline that's blended with ethanol. Smaller re-

At the heart of Mr. Cruz's objections to the biofuels sector is the damaging effect he says it's having on oil-and-gas refiners, some of which say they're heading toward financial ruin because of the federal ethanol mandate, commonly known as the RFS.

help meet the program's yearly targets, and Sen. Chuck Grassley, Iowa Republican, is one of the sector's leading champions in Washington.

That's put him in direct conflict with his fellow Republican, Mr. Cruz, and he strongly denies the allegations made by the Texas senator against the ethanol industry and the RFS specifically.

"There is a manufactured and baseless

fineries that don't have the capacity to blend the fuel themselves must buy RIN credits from larger facilities, and the price of those credits has skyrocketed over the past several years.

But ethanol leaders say the solution is to blend more ethanol, not less, thereby introducing more RINs into the market and driving down prices.

In Texas, ethanol backers say the

senator is wrong to fight only for oil-andgas interests when the state's agriculture sector has benefited from the RFS.

"Sen. Cruz — we've worked with him since he's been in the Senate," said Wesley Spurlock, chairman of the National Corn Growers Association and director of the Texas Corn Producers Board. "We know the oil-and-gas industry is the No. 1 industry in Texas, but then agriculture, grains, livestock, is No. 2. It's a massive industry in Texas. It's too bad we're pitting one industry against another with the RFS."

For his part, the senator has said that there's a potential win-win solution in reforming the RFS — a solution that could save oil refineries but also continue benefiting corn growers. His supporters say his desire for a compromise is because he understands not just the oil industry but also the needs of Midwestern states such as Iowa, largely due to his presence there during his failed 2016 presidential run.

"That's led him to take the bull by the horns on this," said Brendan Williams, vice president of government relations at PBF Energy Co., a New Jersey-based refining company.

Mr. Cruz won the GOP Iowa caucuses in 2016 despite being an outspoken critic of ethanol.





# The ethanol quagmire



By Hon. Wayne Allard

s it does every fall, the U.S.
Environmental Protection Agency announced it is mandating even higher levels of ethanol in our transportation fuel supply while ignoring market realities and the negative impact of the federal Renewable Fuel Standard on American consumers.

The Renewable Fuel Standard, enacted under President George W. Bush in 2005 and expanded in 2007, requires ever-increasing amounts of biofuels to be mixed with fossil fuels each year until 2022. And the EPA has been issuing mandates each November for more

biofuels, particularly ethanol.

These biofuel increases keep coming despite the fact that Americans are driving less (according to the National Association of Insurance Commis-

fuel with no ethanol at all. Motorcycles, marine engines and lawn mowers, to name a few, cannot perform properly on fuel containing more than 10 percent ethanol. In fact, they can suffer fuel

The American Motorcyclist Association is part of a broad coalition whose members are negatively affected by federal mandates to produce more and more ethanol fuel. ... Motorcycles, marine engines and lawn mowers, to name a few, cannot perform properly on fuel containing more than 10 percent ethanol.

sioners) and modern motor vehicles are more fuel efficient. The result of injecting more biofuels into the smaller amounts of fuel being consumed is that in 2016, the overall percentage of ethanol in transportation fuel sold in the United States exceeded 10 percent, according to Ethanol Producer Magazine.

With almost all U.S. gasoline now being sold as E10 (10 percent ethanol by volume), according to the U.S. Energy Information Administration, the only way to increase ethanol in fuel supply is to push the content to 15 percent ethanol (E15) or higher. That's a 50 percent increase in ethanol, compared to E10.

Particularly affected are the consumers whose vehicles and small engines are only engineered to operate on E10 or

system and engine damage, and their warranties may be voided.

The American Motorcyclist Association is part of a broad coalition whose members are negatively affected by federal mandates to produce more and more ethanol fuel. In addition to motorcyclists, they represent small engine owners, fishermen, hunters, boat owners, livestock owners, environmentalists, nutrition agencies, water quality agencies and businessmen.

Concerns in this group range from engine damage — noted above — to water and air quality to feed costs and beyond.

On the business side, a market has sprung up in Renewable Identification Numbers (RIN), the certificates refiners must buy if their ethanol output is below the EPA mandate.

The biofuel mandates and the RIN market have distorted the U.S. fuel marketplace, and the consumers are the ones who suffer.

Meanwhile, the ethanol industry continues to push the EPA to approve E15 blends for year-round sale, something that could result in more air pollution during the summer months at fueling stations. The industry is seeking an exemption from clean air standards.

We believe the Renewable Fuel Standard needs to be rethought and revamped. And we have solutions. There are bills in Congress that would address these issues.

This is a case in which free markets — not mandates — would better serve the needs of the American consumer.

Contact your member of Congress and let them know that, for the benefit of consumers, the ethanol fuel program needs to be changed to meet the various needs and concerns of the American consumer.

Dr. Wayne Allard, DVM, is a former US. Representative and U.S. Senator from Colorado. He is now vice president, government relations, of the American Motorcyclist Association. Please follow @ama\_riding.

# For the health of the nation: The many reasons why ethanol should be phased out

# 10 years offers ample proof

### **By Jerry Jung**

y name is Jerry Jung. I reside in Birmingham, Michigan. Three years ago, I started a webpage entitled "RethinkEthanol.com." The webpage has a link to my resumé outlining both my credentials and my motivation to comment on the proposed rule.

I support the Environmental Protection Agency's (EPA) decision to grant D6 Renewable Identification Number (RIN) waivers to small refiners and also support applying D6 RIN credits for exported corn ethanol. In light of the EPA's acknowledgment of the environmental harm caused by the corn ethanol mandate, I also support lowering the 2019 Renewable Volume Obligation (RVO) for conventional biofuel. In addition, the EPA should minimize the adverse impact of incremental corn production on biodiversity by banning the use of Bt corn for ethanol production.

In the last two years, I have made 20 trips to Washington D.C., on the topic of ethanol mandates. I have met with several dozen legislators, a score of trade and environmental associations as well as key administrative officials including former Administrator Scott Pruitt. Here in Michigan, I have met with farmers and conservation groups with a focus on the harm caused to the Great Lakes due to the additional nutrient loading associated with increased corn production.

The rationale to pass the Renewable Fuel Standard (RFS) included a smorgasbord of admirable objectives, none of which have materialized.

These goals included an inexpensive way to increase the octane ratings of gasoline; a way to reduce reliance on foreign oil imports; a way to invigorate the farm economy; an environmentally friendly manner in which to reduce harmful emissions; and a renewable approach to energy production that would conserve existing resources. Some supporters of the RFS also pointed to food security issues.

Many ethanol advocates still utilize these arguments, but the 10-year history of ramped-up corn ethanol production leaves little room to doubt that the initiative has failed and now hurts many more than it helps. The following comments address each of these lofty goals and why they have not only failed but indeed worsened the very situations they were intended to ameliorate.

### **Unintended consequences**

Background: When ethanol is added to gasoline, its octane rating increases. An increase in octane is not to be confused with an increase in power, as ethanol has less energy density than pure gasoline. What ethanol does, like lead and MBTE before it, is to delay ignition with the result that engines operate at higher compression ratios. This allows car manufacturers to utilize smaller engines. Currently, some car companies are lobbying for higher base octane ratings as a way to reduce costs, improve fuel efficiency and reduce emissions.

The results: Prior to the passage of RFS and the subsequent rapid ramp-up in RVOs, the price differential between grades of gasoline was 10-to-20 cents. Typically, if 87 octane gasoline sold for \$2.00, 89 octane gasoline would sell for \$2.10 and premium grade 91 octane gasoline would sell for \$2.20. Today, the spread between regular gasoline and premium gasoline has increased (here in Michigan) from 20 cents pre-RFS to 90 cents today.1 Thus, the potential cost savings associated with smaller highcompression engines have been more than offset by the increased cost of highoctane fuel.

Another unintended consequence facing car manufacturers is the public outcry that cars are not achieving EPA

This has resulted in shortages of pure gasoline as well as a glut of ethanol blends 3. The export of higher quality gasoline further lowers the average energy density of U.S. blends. EPA fuel economy measurements are based on pure gasoline, vet most motorists utilize an E10 blend. This is a questionable practice that misleads the public because ethanol blends cannot deliver the fuel economy that pure gasoline does.

### Energy use up, not down

**The promise:** The mandated production of corn ethanol will reduce dependence on foreign oil.

The reality: Numerous studies indicate that it takes more fossil fuel to produce corn ethanol than it yields. One Cornell University study estimates that corn ethanol takes 40% more energy to produce than it yields, but most studies center on an input/output ratio of about 1-to-1. 4 Even the Agriculture Department, an unabashed and misguided supporter of ethanol mandates, estimates energy output at only 10% more than the energy inputs. 5 The output increases if credit is given for the leftover distillates fed to livestock, but studies indicate that this practice can sicken cattle and alter the taste and appearance of beef while shortening its shelf life.6

Ethanol producers will tell you that

and other agricultural inputs.

The net effect of corn ethanol mandates is that it dramatically increases domestic energy consumption. If pure gasoline was consumed instead of the ethanol blends prevalent today, the total energy consumed by motorists would decrease significantly because of all the fossil fuel required to produce ethanol.

### **Farm economies upended**

**The goal:** Corn ethanol production will strengthen the domestic farm economy by expanding the market for corn and increasing its price.

The reality: When RVOs were dramatically increased just over a decade ago, corn prices spiked near \$7 per bushel. 7 Therefore, in the short term, the promise of a better farm economy held true. However, the beneficial economic effect for farmers was short-lived. A basic tenet of economics states that supply will increase as prices increase. The production of 15 billion gallons of ethanol requires 40% of the total corn crop and 35 million acres of prime U.S. farmland — an area larger than most states. 8 About 8 million acres of this total has been identified by the National Wildlife Foundation (NWF) as conversion from Conservation Reserve Program (CRP) acreage and from native prairie or forest. The remaining 27 million acres have been diverted from growing food crops such as corn, soybeans or pasture. Other countries have taken up this slack. Whereas the U.S. has historically been the world leader in agricultural exports, Brazil now surpasses the U.S. in soybean exports and Russia surpasses us in terms of wheat exports. Our ethanol policies have bolstered foreign competition for foodstuffs while weakening trade ties and expanding the national trade deficit. Predictably, prices for corn have dropped to the same levels seen before the RFS. 10

A March 2017 study by the Conservative Political Action Committee confirms that the farm economy has weakened during the past decade. It is no wonder. Ethanol is a low-value commodity. A bushel of corn will produce 2.8 gallons of ethanol worth about \$4.50. <sup>11</sup> The same corn fed to poultry produces about \$20 of value and to cattle or pork about \$50 worth of value. 12

It is this value-added chain that creates rural employment and economic diversity. A couple of years ago, I sold some acreage near Coldwater, Michigan, to a pork-processing facility owned by



mileage ratings. Exacerbating this situation is the fact that the U.S. is exporting higher-octane pure gasolines with greater energy density to Europe.

In Europe, where pure gasoline is readily available 2, ethanol blends have not been well received by motorists.

it takes 28% as much energy to produce ethanol as it yields. This is just the amount of fossil fuel consumed in the fermentation and distillation process. It does not take into account the fuel consumed by agricultural tractors and trucks as well as production of fertilizer

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Clemens Food Group. They currently employ about 1,000 workers processing 10,000 hogs per day. Compare this to a 70 million-gallon annual capacity ethanol plant that employs about 30 people while utilizing twice as many bushels of corn as was fed to the processed hogs.

A recent motorcycle tour through Iowa confirmed the downsides to rural communities of what is essentially the industrialization of agriculture. Very little long grass prairie is left in that state — about 3% of the original total. <sup>13</sup> While riding through the state, I noticed a large hand-painted sign that read, "Family farms, not factory farms." One wonders whether this sentiment is related to the diminished sense of community and increasing levels of outside control exerted over the lives of rural families.

Farm profits have not increased in 15 years. <sup>14</sup> The backlash over industrial-scale farming in Iowa is so intense that the state government passed a law banning corporate ownership of farms. <sup>15</sup> Outdoor recreational opportunities for rural families, such as camping, hunting and fishing, have been sharply curtailed as natural areas have been converted to farming. Drinking water supplies have been contaminated by neonics and highnitrate concentrations. <sup>16</sup> The City of Des Moines actually sued upstream agricultural districts in an effort to recoup increased treatment costs. <sup>17</sup>

A typical acre of farmland might produce \$50 of profits for the farmer. That same acre typically requires about \$300 of inputs such as seeds, fertilizer and pesticides. <sup>18</sup> Whereas crop prices are subject to worldwide competitive pressures, agricultural inputs are controlled by cartels and oligopolies — the only winners under the RFS. 19 This situation has only been exacerbated by the recent acquisition of Monsanto by Bayer as well as the merger of DOW and DuPont. Farmers are being squeezed between worldwide commodity markets and locally controlled input prices. Agricultural input prices can be higher domestically than they are in competing countries where agricultural acreages have expanded dramatically since the ramp-up of ethanol mandates.

A popular political misconception is that the majority of Iowans support ethanol mandates. Many times I have heard the comment, "We wouldn't have this stupid policy if Iowa was not the first state to hold primaries."

That may not be the case. Two separate polls, one sponsored by a conservation organization and one by a political candidate, found the majority of Iowans are opposed to ethanol mandates. Recall that Texas Sen. Ted Cruz, the one candidate that consistently opposed ethanol mandates, won the Republican Presidential primary in Iowa in 2016. It is

likely that the uncompromising support for ethanol mandates espoused by many politicians from Iowa is driven by some factor other than popular sentiment.

### 'Green' benefits unrealized

**The sales pitch:** Ethanol is good for the environment.

The outcome: As mentioned previously, mandated ethanol production requires 35 million acres of prime U.S. farmland, the majority of which has come from displacing food crops. Because of the worldwide nature of agricultural commodity markets, foreign countries have taken up the slack, especially Brazil. Few would argue that cutting down rainforests is good for the environment. These forests have been called "the lungs of the Earth" and contain astounding biodiversity. 20 Conservatively, 20 million acres of rainforest, most of it in Brazil, has been converted to cropland due in part to U.S. ethanol mandates. 21 If each of these acres contained 500 tons of carbon sequestered in the form of biomass, then 10 billion tons of carbon (20,000,000 acres times 500 tons per acre) have been logged, cleared or burned. This same acreage is planted into food crops that were once grown in

To put this in perspective, the U.S. consumes less than 1 billion tons of coal per year. <sup>22</sup>

The reduction of habitat has had a profound effect on biodiversity. Of special concern are agricultural practices such as Roundup Ready corn that reduces weeds that many insects and birds depend upon. Of even greater concern is the prevalence of Bt corn that produces biotoxins that kill pests such as corn earworm but also indiscriminately kill all moth and butterfly caterpillars. 23 Corn is a wind-pollinated plant. 24 An internal document that the Bio Innovation Organization shared with me states that Bt also effectively kills aquatic larvae such as mosquitoes. (I am sponsoring independent research to determine the extent to which the wind carries corn pollen and to study the concentrations of viable biotoxic pollen that land on insect food sources as well as aquatic environments at various distances from

Monarch butterflies migrate from Mexico over the Corn Belt. Their populations have plummeted 90% to 95% in recent years. <sup>25</sup> Dramatically increased corn production and widespread use of Bt corn (estimated at 80% of the total) <sup>26</sup> have delivered a "one-two punch" to insect biodiversity. A German study, recently yanked from the internet, pointed to an 80% reduction in insect biomass. The majority of birds eat insects as at least part of their diet <sup>27</sup>, not to mention amphibians, bats and reptiles. <sup>28</sup>

In the 1950s and 1960s, as the DDT pesticide moved up the food chain, it threatened the survival of apex predators such as the bald eagle. Today, huge swaths of toxic corn threaten insects at

the base of the food chain. Rachel Carson's book, "Silent Spring," contributed to the ban of DDT in the United States, but DDT is still manufactured and used in developing countries. <sup>29</sup> Whereas Bt corn has been banned in most European countries, Bayer still profits from its use in the United States. <sup>30</sup> Who is the Third World country now?

The transfer of genetic material between species is more common than previously thought. <sup>31</sup> The exponential increases in the toxic Bt gene sequence as a result of its introduction into food crops increases the likelihood that it will enter the genome of wild plants. This currently unfolding "Insect Armageddon" has the potential to impact the environment in a manner detrimental to humanity. How it will ripple through the ecosystem is anybody's guess.

Air quality is also an environmental concern with ethanol in gasoline.

As the ethanol blend wall increases, so do automotive exhaust emissions of NOx that synthesizes the creation of ozone — a serious health concern. <sup>32</sup> Recognizing this years ago, California Sen. Dianne Feinstein introduced legislation aimed at limiting ethanol use in the nation's fuel supply. <sup>33</sup> Added to tailpipe emissions are the extensive air emissions involved in the farming of incremental corn and the conversion of corn kernels to automotive ethanol.

Polling suggests that the biggest concern related to excessive agricultural production is water quality. 34 The Des Moines lawsuit points to the potential impact on drinking water. A recent University of Michigan study finds that 85% of nutrient overload in the western basin of Lake Erie is due to agricultural runoff. 35 A few years ago, the City of Toledo was forced to shut down its water supply due to toxic algae in Lake Erie. <sup>36</sup> Both Michigan and Ohio have strong agricultural components to their economies, yet the governors from both states have declared the western basin of Lake Erie as impaired. <sup>37</sup> During the peak months of August and September, green sludge covers many square miles of the Lake's surface. With warm temperatures and abundant rainfall washing fertilizers from farms this year, surface algae have returned earlier than normal. 38 I have experienced this toxic sludge firsthand while trying to fish. Scientists have called for a 40% reduction in phosphorus in Lake Erie. <sup>39</sup> Ironically, this is the same percentage of the corn crop dedicated to ethanol. Millions of people rely on the Great Lakes for drinking water and recreation. 40

Agricultural pollution is not limited to inland rivers and lakes. An area the size of New Jersey near the mouth of the Mississippi River will not support marine life due to depleted oxygen levels. <sup>41</sup>

The extra production of fertilizer, herbicides and pesticides associated with increased corn production creates pollution not only when it is applied but also when it is manufactured. Here in Michigan, the Department of Natural Resources advises against eating game taken in the Tittabawasse rivershed<sup>42</sup>, home of a large DOW chemical plant that produces agricultural products.

The recent EPA report that ties environmental degradation to ethanol mandates is welcome news and is beyond reasonable dispute.

### **Energy, food security worse**

**The RFS selling point:** Corn ethanol is a sustainable, renewable source of energy that strengthens domestic energy independence.

**The facts:** Corn production, as it is currently practiced, is not sustainable in terms of water resources, soil health and phosphorus supplies. And how can a practice that does not reduce the use of fossil fuels and effectively doubles energy consumption provide energy independence?

Let's start with the consequences of irrigating non-food crops. Of particular concern is the vast underground Ogallala Aquifer, which touches eight Midwestern states and used to be prime rangeland but is now increasing given over to corn production. This reservoir of clean water is being depleted at an alarming rate and, according to a National Geographic article, will take thousands of years to replenish. <sup>43</sup> With increasingly polluted rivers in the western part of the Corn Belt, it is unwise to subsidize the extraction of water upon which future generations will rely.

Years of intensive agriculture have reduced many farm soils to little more than mineral substrates that are infertile without fertilizers. <sup>44</sup>The production of these fertilizers requires extensive amounts of fossil fuels that are, by definition, not renewable.

Phosphorous, one of the three principal components of fertilizer, is in short supply. The U.S. Geological Survey estimates that only 25 years' worth of reserves of phosphate rock is left in this country. 45

**The pitch:** The RFS will increase food security.

**The results:** A bushel of corn can produce 2.8 gallons of ethanol. <sup>46</sup> The proposed EPA mandate for conventional biofuel is 15 billion gallons in 2019. If history is any indication, about 98% of this total will be from corn. Therefore, well over 5 billion bushels of corn will be reserved for fuel before the remainder is made available to feed livestock and for other uses. <sup>47</sup> In other words, the first 40% of production is reserved for fuel and the surplus for food.

This is outrageous logic that serves to exacerbate supply and price swings for food. For instance, a 20% decline in total corn production translates into a 30% decline in corn available for food. The food industry is many times the size of the ethanol industry. Drought impacted the corn crop in 2012, and



prices rocketed up to over \$7 per bushel. <sup>18</sup> Although the EPA had the authority to reduce the RVO predicated on short supplies, they did not. Does it make sense to affect millions of workers in the food industry; to slaughter poultry, hogs and cattle prematurely; and to drive up the price of food — a most basic human necessity — to protect the relatively tiny ethanol industry? This policy has resulted in food riots in poor countries as they exported corn to the United States instead of feeding it to their people. 49

### Going forward: 5 steps to take

The EPA should be applauded for taking steps to reduce RIN trading prices, but more needs to be done.

- RINs are, in essence, subsidies to ethanol producers funded by a covert tax on refiners, much of which is passed along to motorists. The RIN market is very susceptible to market manipulation, both from a regulatory perspective as well as by speculators. If ethanol production falls short of the RVO, RIN pricing becomes very price-inelastic. Trading of RINs is veiled in secrecy. As a result, Delaware Sen. Tom Carper, among others, have called for transparency. 50
- In addition to utilizing refinery waivers, the EPA should apply RIN credits to exported ethanol. This year, ethanol exports have increased dramatically. If RINs are not allowed to be separated from exported ethanol, then the likelihood of an RVO shortfall increases and RIN pricing has the potential to skyrocket. This further threatens good paying, productive jobs at refineries and in the food sector.
- The most important step that the EPA should take is to lower the D6 RVO. It has lowered RVOs for other categories of biofuels so the precedence has been set. The primary justification for doing so is the environmental damage caused by the RFS that has recently acknowledged by the EPA. Under no circumstances should the RVO be higher than the previous year's domestic supply of ethanol.
- An additional step in line with the EPA's mission to protect the environment would be to phase out the use of Bt corn. It borders on insanity to allow wind-pollinated plants to be genetically modified to spread biotoxic pollen.
- The EPA should also provide non-politically motivated scientific advice to legislators currently attempting to draft legislation addressing the RFS as well as the related issues of octane ratings and CAFE standards. This scientific advice should be grounded in common sense and take into account the total environmental picture, not just tailpipe emissions or fuel economy.

The sentiment among many in Washington D.C., is that any change to the RFS must be acceptable to all parties.

However, subsidized and mandated production of corn has too many economic and environmental downsides to be held hostage to special interest politics.

Jerry Jung is a successful businessman, philanthropist and author who is active with several environmental and conservation nonprofits. He is the founder of ReThink Ethanol, a nonprofit group dedicated to raising awareness and education about ethanol usage. This article is based on comments filed with the EPA on its Proposed Rule for 2019 Biomass Volumes. Please follow @rethinket.

Comments on EPA RVO Works Cited

- 1. Jung, J. (2018, July 09). Current Michigan Gas Prices [Photograph]. Comments on EPA RVO, Michigan.
- 2. Jung J. (2018, July 31). Current EU Gas Prices [Photograph]. Comments on EPA RVO, Michigan.
- 3. Hawranek, D., & Neubacher, A. (2011, April 19). Out of Gas: E10 Debacle Puts the Brakes on Biofuels - SPIEGEL ONLINE - International. Retrieved August 14, 2018, from http://www. spiegel.de/international/germany/outof-gas-e10-debacle-puts-the-brakes-onbiofuels-a-757812.html
- 4. Lang, S. S. (2005, July 5). Cornell ecologist's study finds that producing ethanol and biodiesel from corn and other crops is not worth the energy Cornell Chronicle. Retrieved from http://news.cornell.edu/stories/2005/07/ ethanol-biodiesel-corn-and-other-cropsnot-worth-energy
- 5. Gallagher, P. W., Ph.D., Yee, W. C., & Baumes, H. S., Ph.D. (2016, February). 2015 Energy Balance for Corn-Ethanol Industry. Retrieved from https://www. usda.gov/oce/reports/energy/2015Energy BalanceCornEthanol.pdf
- 6. Kalscheur, K. F., Garcia, A. D., Schingoethe, D. J., Diaz Royón, F., & Hippen, A. R. (2012). Bio-Fuel Co-Products as Livestock Feed. Retrieved from http:// www.fao.org/docrep/016/i3009e/i3009e. pdf
- 7. Hart, C. E., Ph.D. (2015, January 13). Swings in Corn Supply, Demand Impact Global Markets @EthanolMagazine. Retrieved from http://www.ethanolproducer.com/articles/11807/swingsin-corn-supply-demand-impact-global-
- 8. Mumm, R. H., Goldsmith, P. D., Rausch, K. D., & Stein, H. H. (2014, April 12). Land Usage Attributed to Corn Ethanol Production in the United States. Retrieved from https://www.ncbi.nlm. nih.gov/pmc/articles/PMC4022103/
- 9. Weinraub, M. (2018, February 16). U.S. set to lose top spot as global corn exporter to Brazil. Retrieved from https://www.reuters.com/article/us-usacorn-exports-analysis/u-s-set-to-losetop-spot-as-global-corn-exporter-tobrazil-idUSKCN1G01VW

10. Irwin, S. (2016, June 01). Ethanol Prices Drive Corn Prices, Right? • farmdoc daily. Retrieved from https:// farmdocdaily.illinois.edu/2013/10/ethanol-prices-drive-corn-prices.html

- 11. Sawyer, J. (2015). E85 Frequently Asked Questions and Answers. Retrieved from http://www.corunna-mi. gov/government/city\_manager/docs/ E85/e85incfrequentlyaskedquestionsandanswers.pdf
- 12. Corn Growers Association, I. (2018). Corn Facts. Retrieved from https://www.iowacorn.org/media-page/ corn-facts
- 13. Cohen, D. (2001, September). Iowa Prairies. Retrieved from https://store. extension.iastate.edu/Product/Iowa-Prairies-Biological-Communities-PDF
- 14. Eller, D. (2017, May 20). Make or break year? Iowa farmers battle for profits as debt, delinquencies rise. Retrieved from https://www. desmoinesregister.com/story/money/ agriculture/2017/05/18/make-breakyear-iowa-farmers-battle-profits-after-3-years-falling-income-rising-delinquencies/312736001/
- 15. Tidgren, K. A. (2015, October 25). Iowa's Anti-Corporate Farming Laws: A General Overview | Center for Agricultural Law and Taxation. Retrieved August 12, 2018, from https://www.calt. iastate.edu/article/iowas-anti-corporatefarming-laws-general-overview

16. Royte, E. (2017, December 07). The Simple River-Cleaning Tactics That Big Farms Ignore. Retrieved from https:// news.nationalgeographic.com/2017/12/ iowa-agriculture-runoff-water-pollutionenvironment/.

- 17. Dowell, T. (2017, January 31). Iowa Supreme Court Issues Ruling in Des Moines Water Works Case - Texas Agriculture Law. Retrieved from https:// agrilife.org/texasaglaw/2017/02/06/ iowa-supreme-court-issues-ruling-desmoines-water-works-case/
- 18. Mitchell, L. (2014, October 23). Are Farmers Rich? Retrieved from https://www.iowacorn. org/iowa-corn-stalk/2014/10/23/ are-farmers-rich
- 19. Hueth, B. M., & Marcoul, P. (n.d.). Information Sharing and Oligopoly in Agricultural Markets: The Role of Bargaining Associations. Retrieved September, 2002, from https://lib.dr.iastate. edu/cgi/viewcontent.cgi?referer=https:// www.google.com/&httpsredir=1&article =1334&context=card\_workingpapers
- 20. Lee, D. P. (2011). Forests Our Green Lungs | Climate Protection. Retrieved from https://en.reset.org/ knowledge/forests-our-green-lungs
- 21. Tabuchi, H., Rigby, C., & White, J. (2017, February 24). Amazon Deforestation, Once Tamed, Comes Roaring Back. Retrieved from https://www.nytimes. com/2017/02/24/business/energy-environment/deforestation-brazil-boliviasouth-america.html
- 22. Tedford, D. (2010, April 08). Why We Still Mine Coal. Retrieved from https://www.npr.org/templates/story/ story.php?storyId=125694190

23. Jabr, F. (2013, September 03). Farming a Toxin to Protect Crops, Pollinators and People. Retrieved from https://www.scientificamerican.com/

article/farming-a-toxin/

- 24. Missouri, U. O. (2012, July 11). Corn Pollination, the Good, the Bad, and the Ugly-Pt 1. Retrieved from https:// ipm.missouri.edu/IPCM/2012/7/Corn-Pollination-the-Good-the-Bad-and-the-Ugly-Pt-l/
- 25. Robertson, M. (2018, February 06). Latest count finds sharp decline in monarch butterflies wintering in California. Retrieved from https://www.sfgate.com/ science/article/monarch-butterfly-decline-california-mex-migration-12553755.
- 26. Fausti, S. W. (2015, May 26). The causes and unintended consequences of a paradigm shift in corn production practices. Retrieved from https://www. sciencedirect.com/science/article/pii/ S1462901115000908
- 27. University, D. (n.d.). WHAT DO BIRDS EAT? Retrieved 2011, from http://vireo.ansp.org/bird\_academy/ bird\_diets.html
- 28. Bats. (2018). Retrieved from https://www.michigan.gov/dnr/0,4570,7-350-79135\_79218\_79619\_84901---,00.html

Kusler, A., & Tingler, J. (1998). Retrieved from http://calscomm.cals.cornell.edu/naturalist/Naturalist-Outreach-Reptile-diversity-feeding-defense.pdf

- 29. DDT A Brief History and Status. (2017, August 11). Retrieved August 14, 2018, from https://www.epa.gov/ ingredients-used-pesticide-products/ ddt-brief-history-and-status
- 30. Coghlan, A. (2015, October 5). More than half of EU officially bans genetically modified crops. Retrieved August 14, 2018, from https://www. newscientist.com/article/dn28283-morethan-half-of-european-union-votes-toban-growing-gm-crops/
- 31. Hayden, E. C. (2018, August 13). A New View of Evolution That Can't Be Represented by a Tree. Retrieved August 14, 2018, from https://www.nytimes. com/2018/08/13/books/review/davidquammen-tangled-tree.html
- 32. Peplow, M. (2014, April 30). Ethanol Fuels Ozone Pollution. Retrieved from https://www. scientificamerican.com/article/ ethanol-fuels-ozone-pollution/
- 33. Feinstein, Toomey Introduce Bill to Repeal Ethanol Mandate. (2015, February 26). Retrieved from https://www. feinstein.senate.gov/public/index.cfm/ press-releases?ID=6lbcf916-ld17-4eba-805d-5b24fcd0a948
- 34. Mateo-Sagasta, J., Zadeh, S. M., & Turral, H. (2017). Water pollution from agriculture: A global review. Retrieved from http://www.fao.org/3/a-i7754e.pdf
- 35. Read, J. (2017, October 26). Informing Lake Erie Agriculture Nutrient Management via Scenario Evaluation. Retrieved from http://graham.umich. edu/water/project/erie-western-basin
- 36. Herbert, J. (2014, August 8). The Toledo water supply shut down. Why "boil water" advisories were not enough. Retrieved from http://msue.anr.msu.

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# Why America's recreational boaters need RFS reform



### By John McKnight

s acting Environmental Protection Agency
Administrator Andrew
Wheeler will soon learn,
if he hasn't already, reforming the Renewable
Fuel Standard (RFS) is critical to the
economy and boaters. The recreational
boating industry supports 650,000
American jobs and contributes \$39
billion to the economy each year. And,
approximately 142 million boaters take
to the water annually.

Unfortunately, recent efforts to expand the sale of gasoline containing 15 percent ethanol — commonly known as E15 — at the pump year-round will put marine manufacturers and boaters at risk by making an unsafe and unreliable fuel choice universally available.

Boat engines and fuel systems cannot process El5 safely. However, according to a Harris Poll commissioned



To prevent the damage that the proposed E15 expansion would cause, the National Marine Manufacturers Association (NMMA) is calling on President Trump and the EPA to recognize the harmful effects of E15 on marine products and implement policies that expand renewable fuel options

by the Outdoor Power Equipment Institute, only 20 percent of consumers notice ethanol content at a gas pump. Because 95 percent of boats are towable, most recreational boat owners are at risk of misfuelling at their local gas station.

In order to prevent the damage that the proposed E15 expansion would

cause, the National Marine Manufacturers Association (NMMA) is calling on President Trump and the EPA to recognize the harmful effects of El5 on marine products and implement policies that expand renewable fuel options. A great place to start is breaking down all regulatory impediments to the full-scale commercialization of

biobutanol — a biofuel that is more similar to gasoline than ethanol.

While EPA's decision in June to allow the registration of biobutanol as a fuel additive is encouraging, additional commonsense steps are needed. NMMA sent a letter to EPA in June outlining two immediate actions: allow biobutanol blending with current gasoline base stocks and accept current refiners process transfer statements to include biobutanol blending. These measures will enable smaller gasoline blenders to get their products to gas stations and expand availability to boating consumers.

Unlike El5, which causes severe damage to marine engines, biobutanol delivers more renewable energy content than ethanol while remaining compatible with current vehicles, boats, and infrastructure. Biobutanol is far superior to ethanol in many ways, and, as our data shows, it is poised to be the next generation biofuel.

As we seek to reform the RFS and improve the lives of American businesses, consumers, and families, the administration should not rule out innovative solutions. By expanding access to more types of renewable fuels, like biobutanol, and making sure that consumers are aware of potential dangers, we can keep our economy strong, growing, and working for everyone.

John McKnight is senior vice president of Environmental, Health, and Safety Compliance at the National Marine Manufacturers Association. Please follow @therealnmma.

# **JUNG**

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edu/news/the\_toledo\_water\_supply\_shut\_down\_why\_boil\_water\_advisories\_were\_not\_enoug

37. Geist, M. E. (2018, April 03). Lake Erie has been declared impaired. So what? | Great Lakes Now. Retrieved from https://www.greatlakesnow. org/2018/04/lake-erie-has-been-declared-impaired-so-what/

38. Morrison, L. (2018, July 06). The First 2018 Lake Erie Algal Bloom Forecast is Here, and It's Not Pretty. Retrieved from https://www.clevescene.com/scene-and-heard/archives/2018/05/07/the-first-2018-lake-erie-algal-bloom-forecast-is-here-and-its-not-pretty

39. Erikson, J. (2016, March 22). Lake

Erie phosphorus-reduction targets challenging but achievable. Retrieved from https://news.umich.edu/lake-erie-phosphorus-reduction-targets-challenging-but-achievable/

40. Jung, J. (2018, July). Lake Erie on Recent Fishing Trip [Digital image].

41. Wines, M. (2014, August 04). Behind Toledo's Water Crisis, a Long-Troubled Lake Erie. Retrieved from https://www.nytimes.com/2014/08/05/us/lifting-ban-toledo-says-its-water-is-safe-to-drink-again.html

42. Schrouder, K. S., Lockwood, R. N., & Baker, J. P. (2009, September). Tittabawasse River Assessment. Retrieved from https://www.michigan.gov/documents/dnr/SR52\_text\_540515\_7.pdf

43. Dimick, D. (2014, August 21). If You Think the Water Crisis Can't Get Worse, Wait Until the Aquifers Are Drained. Retrieved from https://

news.nationalgeographic.com/ news/2014/08/140819-groundwater-california-drought-aquifers-hidden-crisis/

44. Hidden Costs of Industrial Agriculture. (2018). Retrieved from https://www.ucsusa.org/food\_and\_agriculture/our-failing-food-system/industrial-agriculture/hidden-costs-of-industrial.html#. W0GHBthKit8

45. Werkheiser, W. H. (2018, January 31). Mineral Commodities 2018. Retrieved from https://minerals.usgs.gov/minerals/pubs/mcs/2018/mcs2018.pdf

46. Sawyer, J. (2015). E85 Frequently Asked Questions and Answers. Retrieved from http://www.corunna-mi.gov/government/city\_manager/docs/E85/e85incfrequentlyaskedquestionsandanswers.pdf

47. Carter, C. A., & Miller, H. I. (2012, July 30). Corn for Food, Not Fuel. Retrieved from https://www.nytimes.

com/2012/07/31/opinion/corn-for-food-not-fuel.html

48. Yousuf, H. (2012, July 20). Corn, soybean prices shoot up as drought worsens. Retrieved from https://money.cnn.com/2012/07/19/investing/cornsoybean-prices/index.htm

49. Istook, E. (2008, February 26). Ethanol policy threatens to starve the world. Retrieved from https://www.heritage.org/energy-economics/commentary/ethanol-policy-threatens-starve-the-world

50. Carper Calls on President Trump to Address RFS Market Manipulation. (2018, March 16). Retrieved August 14, 2018, from https://www.carper.senate.gov/public/index.cfm/2018/3/carper-calls-on-president-trump-to-address-rfs-market-manipulation

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# Ethanol industry, small-engine manufacturers clash over damage from fuel

By Ben Wolfgang

THE WASHINGTON TIMES

Manufacturers of lawn mowers, snowblowers, chainsaws, and other small-engine equipment continue fueling a debate over the supposed dangers of ethanol, but the ethanol industry argues that they are merely looking for a scapegoat to mask operator error.

Gasoline blended with ethanol has become commonplace for American drivers, especially since Congress enacted the 2007 Renewable Fuel Standard and began mandating increasing amounts of the fuel at gas pumps across the country. Critics argue that while such blends — including the most common, E10, which combines 10 percent ethanol with regular gasoline pose no problems for automobiles, they can often wreak havoc on small engines.

Those problems become even worse, they say, with higher ethanol blends such

"You're putting alcohol into the fuel. They're different atoms. They don't like to stay married," said Kris Kiser, president and CEO of the Outdoor Power Equipment Institute, the leading trade group for power equipment and utility vehicle manufacturers. "This is a big deal, and everybody wants to downplay it. But we're pretty sensitive to it."

One of the key issues, Mr. Kiser and others argue, is how rarely much of the small-engine equipment is used. While automobiles run through tanks of gas relatively quickly, lawnmowers and other small machinery often contain the same gasoline for weeks or months.

Over time, the ethanol attracts moisture, separates from the fuel, and causes serious engine problems, steering car owners to repair shops.



"Sometimes a customer will have an issue and it's not covered under warranty because it's a fuel storage issue," said Terry Ditsch, vice president of product service at Echo USA, one of the nation's leading small-engine products manufacturers.

Like a host of other companies, Echo has produced a guide sheet warning customers to avoid any ethanol blend higher than E10 and urging them to take extra precautions when using gasoline blended with ethanol.

Some companies even offer specially designed fuel that is entirely free of ethanol.

Both sides of the debate point to studies that seem to prove their points, though anecdotal reports of engine problems have skyrocketed since ethanol has become more prominent, Mr. Kiser and others say.

Ethanol proponents say most of the

problems in small-engine equipment can be traced back to simple mistakes by the owner, not any inherent problems with ethanol itself.

"You can bring it into a mechanic and he says, 'Do you use ethanol? There you go, that's the problem,' without having ever diagnosed it," said Donn Larson, the CEO of Larson Sales in Hudson, South Dakota, a wholesale distributor of outdoor power equipment.

"You put fuel in there and ethanol gets blamed. It's easy," he added. "And people buy into it in droves. But speak to them, ask them where they got their information and why they think ethanol is a problem, and they typically can't answer you."

Mr. Larson and other ethanol backers contend that owners either allow fuel to sit too long in their equipment or use a blend that is incompatible with their products. A

15 percent ethanol blend, for example, isn't suited for some older pieces of equipment.

Others see the Outdoor Power Equipment Institute and other critics as unwitting agents of the oil and gas industry, which long has opposed federal ethanol mandates and increased use of the fuel. The small-engine complaints, they say, are just pieces of a broader war against ethanol.

'We're a threat, and that's not compatible with the status quo," said Doug Berven, vice president of corporate affairs at POET, a South Dakota-based biofuels company. "From an ethanol industry [perspective], what we want is to offer choice to the consumer. We would like to see all different types of fuel blends at a pump so a consumer always has the best value."

But whether consumers fully understand the choices they are getting remains an open question. E15, for example, has been federally approved for automobiles made in 2001 or later. Using the blend in vehicles older than that could lead to engine problems.

Mr. Ditsch and others argue that customers simply may not pay attention to the specific type of fuel they are using, especially if they are accustomed to filling up with the cheapest choice at the pump.

'The problem is you've got this little sticker nobody pays attention to," he said. "This thing with E15, where it's available but it's not really for small engines you've got a disconnect between what's available in the marketplace and the general public's understanding of where it can be used."

This news article first published online on April 9, 2017.

# Demand grows for ethanol-free fuel

By Ben Wolfgang

THE WASHINGTON TIMES

Ethanol's rise over the past decade has given birth to an under-the-radar market: Americans who are willing to travel miles out of their way and pay significantly more per gallon for ethanol-free fuel.

Like locally sourced food or antibioticfree chickens and eggs, so-called E0, or "pure gas," has generated a cultlike following willing to pay a premium. More than 12,000 service stations across the U.S. and Canada now offer E0, according to pure-gas.org and other groups that track

fuel trends.

While federal mandates make finding pure gas somewhat difficult — the vast majority of stations in the U.S. sell primarily E10, gasoline blended with about 10 percent ethanol — specialists say there is a dedicated market for the product. Some customers may hold fast to the notion that ethanol damages engines over time, or they may want to protest government policies that have forced increased amounts of ethanol into the gasoline supply.

Whatever the reason, the service station owners that sell pure gas, often at a per-gallon price 40 cents higher than E10, have found increasing demand.

"Consumers don't buy things because retailers sell them. Retailers sell them because consumers want to buy them. If you see an outlet that's selling pure gasoline, nonblended gasoline, it means there's a significant demand in the market," said R. Timothy Columbus, a Washington lawyer who represents the Society of Independent Gasoline Marketers of America and the National Association of Convenience

"People may have 1,000 reasons they want to buy it," he said. "Retailers have only one reason they sell it, and that is consumers want it."

Ethanol proponents attribute the desire for E0 fuel to the public relations war waged by the oil and gas industry, whose share of the fuel market could be chipped away further by growth of the ethanol industry.

Other trade groups, such as those representing small-engine manufacturers, also have taken a public stand against ethanol. They warn that the fuel harms their products and urges the public to be wary of gasoline with increasingly high

» see DRIVE | C17

# , SPECIAL REPORT PREPARED BY THE WASHINGTON TIMES SPECIAL SECTIONS DEPARTMENT $\mid$ WEDNESDAY • SEPTEMBER 5 • 2018

# EPA report cites damaging impact of Renewable Fuel Standard



### **By David French**

he Environmental Protection Agency recently released a report on the impacts of the federal Renewable Fuel Standard that requires billions of gallons of ethanol be blended into the nation's gasoline supply each year. And the report — which is four years late — comes to the same conclusion that we've known for years: The RFS isn't working.

The "Biofuels and the Environment" study is the EPA's second report to Congress in which the agency has found serious, significant problems with the RFS.

In this new report, the EPA found that biofuel production associated with large-scale cultivation of corn and soybeans has had damaging effects on the environment, many of which are attributed to overplanting the two crops. These two commodities are the foundation of our food supply, but



they are also the dominant feedstocks for biofuel production. Increased corn and soybean cultivation has led to more pesticide use and runoff, which has degraded water quality, ecosystem health, soil quality and possibly even air quality, which is ironic given that the RFS was passed as an amendment to the Clean Air Act.

The report also blames the RFS for contributing to land-use change and decreased biodiversity. These

consequences have long been known to the environmental and conservation communities, many of which originally supported the RFS but have turned against it now that its true impacts are clear.

The RFS would be lousy policy on the basis of the environment alone, but it also whacks everyday consumers in the form of higher food costs. Since the RFS became law in 2005, restaurants — including the small business franchise owners who operate under nationally known chain restaurant brands — have borne the brunt of volatile and unpredictable costs. For example, corn prices in the RFS era have fluctuated between \$3 and \$8 per bushel, compared with a \$2 average in the 10 years prior to the RFS.

Due to corn's prominent use in animal feed, higher corn prices translate into higher prices for other commodities such as beef and poultry. Because chain restaurants and small business franchisees operate on thin profit margins, these extra costs inflate the bills of consumers.

When the RFS was first introduced, corn and soybean ethanol were sold as a "bridge" to greener fuels such as cellulosic and advanced biofuels. According to the EPA report, however, substantial volumes of those fuels have not been produced as anticipated, and large-scale use of feedstocks other than corn and soybeans has not occurred. Even worse, the report concludes that large-scale production is not likely to be reached anytime soon.

Those in the restaurant business have long known of the damage caused by the RFS. Now we have yet another report to provide it. Unless Congress acts to overhaul this broken law, the RFS will continue to harm the environment, businesses and ultimately, consumers. The time for action has come.

David French is executive director of the National Council of Chain Restaurants in Washington, D.C. For more information, follow @NRFnews.

# DRIVE

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levels of ethanol.

"We've seen these scare tactics from the oil industry and even the small and off-road engine industries. You have the combination of all the negativity being well-funded and the opportunity for these fuel retailers to capitalize on that concern," said Robert White, vice president of industry relations at the Renewable Fuels Association, a lead-

ing ethanol trade group.

While refiners obviously can sell E0 to service station owners who in turn sell it to customers, the underlying process is more complicated.

The 2007 Renewable Fuel Standard,

federal legislation passed with bipartisan support and signed by President George W. Bush, called for increased amounts of ethanol to be blended into the nation's gasoline supply each year. Right now, the mandate calls for a roughly 10 percent blend average.

That doesn't mean that every single gallon of fuel sold in the U.S. contains 10 percent ethanol. Higher blends such as E15 or E85 are also available at many stations across the country, just as E0 is becoming increasingly common.

To comply with the federal requirements, fuel companies must submit renewable identification numbers, or RINs, to the Environmental Protection Agency.

Companies that sell E0 must have higher blends, such as E15, available

elsewhere. If they'll fall short of the 10 percent average, they can purchase RINs from other companies that exceed the threshold.

"The way it works is because EPA set the standard now just over 10 percent. For every gallon of E0 that gets sold, somewhere else in the country there's some amount, a corresponding amount, of E85 or E15 or some other fuel that's being blended into the market to provide the RINs that enable the retailer of E0 to sell that fuel," said Patrick Kelly, senior fuels policy adviser at the American Petroleum Institute, the oil and gas sector's leading trade organization.

Mr. Kelly said the API is fully supportive of El0 for highway and nonroad engines.

"Above and beyond that, that's a whole host of other issues," he said, reiterating concerns that E15 and higher blends could pose problems for at least some engines.

Moving forward, the ethanol industry believes that E0's share of the marketplace eventually will peak.

"I think there's room for growth before they figure out where the market penetration value is," Mr. White said. "At some point, if the station across the street offers [E0], the margin isn't going to be as strong. The competition will drive that back down to [consumers saying], 'OK, maybe E10 is a better deal."

\* Reporting for this story, which first appeared online on April 25, 2017, was funded in part by the nonprofit Washington Policy Institute.

# Ethanol mandate: Costly to consumers, devastating to chicken industry



By Mike Brown

he Environmental Protection Agency (EPA) this summer issued its proposal for the 2019 mandated used of ethanol in the U.S. fuel supply. Of course, it was set at the absolute maximum allowed by law.

This annual rite is a stark reminder of the costs heaped onto American chicken farmers by the misguided 2007 Renewable Fuel Standard (RFS). That policy creates an unfair advantage for the politically coddled ethanol industry by diverting corn away from food and

feed and into gas tanks.

Ultimately, American consumers bear the added costs of the RFS, but poultry producers, meat packers and others face their own significant economic challenges. The price of corn feed is generally the most expensive part of raising chickens, and the RFS ethanol mandate has cost chicken producers an extra \$62.5 billion in higher actual feed costs since 2007 compared with a 2006 baseline. Over that period, more than a dozen major producers have ceased operations.

The RFS has steadily grown more expensive and more detached from its original good intentions. At the time the RFS was adopted, the chicken industry was led to believe it included a workable "off-ramp" that would reduce mandates in times of economic crisis. That belief has proven to be very naïve.

On two occasions — in 2008, the first year that expanded ethanol mandates were foisted on the market and drove corn prices to historic record highs, and in 2012 during the worst drought in more than 50 years — EPA ignored the promised economic safety valve. The results were devastating to the chicken industry. Today, chicken producers remain just one flood, freeze



or drought away from another crisis; yet the RFS continues to be expanded.

The original 2007 statute set a cap on mandated ethanol use at 15 billion gallons but to little effect. Last year, total production of ethanol was 15.8 billion gallons, and average weekly production to date is running ahead of last year's pace and on trend to hit nearly 16 billion gallons. That's the equivalent of about 5.7 billion bushels of corn. To put that volume in perspective, the year the RFS was adopted, total U.S. corn production

was 10.5 billion bushels.

The RFS is broken. Dozens of consumer and taxpayer advocacy organizations, hunger charities, engine manufacturers, restaurants, academics, and livestock and poultry producers agree. It's time for Congress to stand up to Big Ethanol and reform the RFS.

Mike Brown is president of the National Chicken Council (@chickencouncil) in Washington, D.C.

# Even in the Midwest, ethanol mandate hurts more than it helps



**By Nicolas Loris** 

The federal Renewable Fuel Standard, aka the ethanol mandate, is often assumed to be a boon for the Midwest. Surely, the grain belt must benefit, even if everyone else has to suffer with inferior fuel at the gas pumps.

Except, they don't. Most people in the agricultural heart of America suffer from this boondoggle, too.

Corn and soybeans — while excellent as foods — are far less efficient than oil as a fuel source. When these commodities are diverted from the table to the pump, Midwestern Americans — like the rest of us — have to pay more for both fuel and food. Whether it's a small trucking business in Minnesota, a fastfood franchise in Iowa or your average Joe in Illinois filling up his tank on the way to the grocery store, they're all pay-

Livestock and poultry producers pay more, too. Corn and soybeans are staple ingredients of the feed they use on their ranches and farms. The ethanol mandate artificially increases their cost

of doing business by raising the cost of feed corn and soybean meal. That's why the National Chicken Council, National Cattlemen's Beef Association, National Pork Producers Council, the Milk Producers Council and the National Turkey Federation all oppose the mandate.

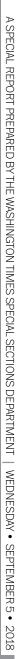
Four of the top six turkey-producing states are Minnesota, Arkansas, Indiana and Missouri. Iowa ranks No. 1 in egg production and processing where, according to the Iowa Poultry Association, the chickens consume "55 million bushels of corn and 504,500 tons of soybean meal yearly." Nebraska, Kansas, Oklahoma and Iowa are some of America's top beef-producing states.

Yet another concern is that ethanol has proved to be harmful to smaller engines like those that power motorcycles and boats. Some top corn-growing states also happen to be the states with the

most motorcycles per capita. According to a report from the Motley Fool, Wisconsin (1 motorcycle per 17.8 people), Iowa (1 motorcycle per 16.5 people) and South Dakota (1 motorcycle per 8.9 people) rank in the top four. Furthermore, there are boat owners aplenty in the Land of 10,000 Lakes. The Mississippi River, too, is a hugely popular playground for recreational boaters.

Anyone tempted to declare the ethanol mandate an economic win for America's heartland should pause to tally the costs it extracts from the general population. The math is not so pretty when it encompasses the whole equation.

Nicolas Loris is The Heritage Foundation's Herbert and Joyce Morgan Fellow, specializing in energy, environmental and regulatory policy analysis. Please follow @Heritage and @NiconomistLoris.





# Renewable Fuel Standard: This 'dog' won't hunt



By Harry C. Alford

e support regulations that benefit the economic vitality of our capitalistic nation and serve no threat to our national security. The Renewable Fuel Standard (RFS) was a program that seemed to be consistent with that mission. However, it is without a doubt a program that is filled with "unintended consequences."

First, the government mandate that corn be used in fuel drove up the cost of corn, which, in turn, increased the

# National Black Chamber of Commerce®

cost of nearly every food there is. Most foods at the grocery store have corn syrup, corn starch or some other corn derivative. Prices for all are higher because of the mandate. Most meats, including chicken, turkey, beef and

Second, it was claimed that the Renewable Fuel Standard would be good for the environment. That is far from the truth. The fact is it takes 28 percent more energy to produce corn ethanol fuel than to stay with simple fossil

The concept that the government has mandated exactly what will be used for fuel and how much will be produced annually squelches innovation and new advances. Since the government has decided winners and losers ... nearly all of us become losers. They have created an incentive not to develop new, more efficient technology.

pork come from animals that eat corn feed. When the price of corn goes up, it has a direct effect on the price of those commodities. Also, eating out is more expensive for the same reason whether it is at McDonald's or a fivestar restaurant.

fuels. That is more greenhouse gases, not less. If greenhouse gases are causing global warming, the RFS is making it worse.

Also, corn crops have more chemical and phosphorous runoff than any other crop. This increases pollution of our waters as well as our air. Therefore, the Sierra Club and the National Black Chamber of Commerce are together on this issue.

Older auto engines and small engines for lawn mowers, snow blowers, motorcycles, etc., are not designed to handle corn ethanol fuel, and its use can result in damage — and a shortened lifespan — for those engines. The difference is overwhelming. The cost increase affects everyone.

The concept that the government has mandated exactly what will be used for fuel and how much will be produced annually squelches innovation and new advances. Since the government has decided winners and losers ... nearly all of us become losers. They have created an incentive not to develop new, more efficient technology.

It is quite clear that those with limited resources will be affected the most. We are causing economic pain on our citizens and business owners. Also, we are putting Mother Earth at more risk.

••••• Harry C. Alford is president and CEO of the National Black Chamber of Commerce (nationalbcc.org). He can be reached at halford@nationalbcc.org.



# Taxpayers tell Congress: Stop meddling in fuel markets

## **By The National Taxpayers Union**

ore than 10 years after the Renewable Fuel Standard (RFS) was expanded and finalized in 2007, policymakers are still wrestling with how to implement this big-government boondoggle. Unintended consequences litter the past decade of the RFS regime, but reform has been hard to achieve even as the toll to consumers and taxpayers mount. As we near the 2022 horizon, when the Environmental Protection Agency (EPA) is set to become the sole arbiter of the RFS, Congress needs to act while it still can.

The profound failures of the RFS are no surprise to any student of free markets. Government meddling creates market distortions and triggers a host of painful repercussions. These are both seen and unseen, intended and unintended. Often, due to the law of dispersed costs and concentrated benefits, the effect can be marginal for most people and largely undetected.

That's not at all the case with the RFS. There are few federal policies where so many can see so tangibly the cost of government interference as in the transportation fuel marketplace. Increased volumes of corrosive ethanol have wreaked havoc on small engines such as motorcycles and chainsaws. Marine engine failure can be caused by



phase-separation, when water and ethanol settle out of the fuel mixture into the bottom of the tank, stranding boaters far from shore. Lower energy content in ethanol blends means lower gas mileage (and higher costs) for drivers who have to fill up more often.

The repercussions are also felt outside these direct hits to the family budget. RFS incentivizes corn and soybean cultivation at the expense of other crops. The artificial demand mandated by Washington makes it justifiable for agribusinesses to plant on environmentally sensitive land, leading to habitat loss. Corn growing depletes the soil, increasing the need for fertilizers that then run off, affecting water quality and leading the uptick in harmful algae blooms and dead zones in the Great Lakes and the Gulf of Mexico. And taxpayers get another hit to the wallet to fund programs to clean up these hazards at the local, state and federal level.

Crop diversification has fallen as land devoted to ethanol production

has jumped. The diversion of more than 40 percent of corn production to Americans' gas tanks has injected unnecessary risk into the food chain where one drought (such as the one in 2012) or other disaster could make costs skyrocket for food producers and consumers.

By playing favorites with commodities, the RFS is currently contributing to a growing "corn glut," exacerbated by high yields and trade uncertainty. Like squeezing one end of a balloon, government meddling in one area of the farm economy necessarily leads to problems elsewhere. This poking and prodding from Washington, with the goal of pouring more corn into fuel tanks, makes our farm economy less resilient and less responsive to market signals.

Despite all this, so far Congress has failed to unravel the RFS web — trapping taxpayers. To its credit, the EPA has used its authority to adjust the Renewable Volume Obligations (RVOs) by setting volumes under the statutory

thresholds. And, more recently, after a Philadelphia area refiner was bankrupted by the volatile Renewable Identification Number (RIN) market (itself another toxic byproduct of the ethanol mandate), the EPA has provided hardship waivers that exempt some small producers from compliance.

Without congressional action, however, there's little the EPA can do to lift this burden on consumers and the economy. While the EPA can turn some dials in the RFS formula, such as forcing higher blends like E15 into the marketplace and displacing the E0 blend that many small engine users seek, the RFS is fundamentally at odds with real-world consumption habits and free-market principles.

Government meddling in markets never ends well. And soon, Congress could be leaving even more power to dictate the fuel choices of consumers in the hands of an agency with a legacy of overreach. Consumers and taxpayers shouldn't have to keep paying such a high price for past mistakes. It's time to inject some common sense into our economic engine and take on the broken RFS.

Founded in 1969, the National Taxpayers Union is the "Voice of America's Taxpayers." Its mission is to achieve favorable policy outcomes using the most effective pro-taxpayer team on Capitol Hill and in the states. @NTU.



# An outdated mandate that drives up gasoline prices



By Thomas J. Pyle

nly in Washington do we call expanding a program "reform" and more special-interest handouts "fixes." That's precisely what's happening with the Renewable Fuel Standard (RFS) — an outdated ethanol mandate that drives up gasoline prices and puts refiners out of business.

In a continuation of this unending saga, corn and refining state senators met again at the White House earlier this year to discuss "solutions" for the RFS' many shortcomings.

For more than a decade — as free market competition and private sector ingenuity, not government's heavy hand, transformed our nation's energy outlook for the better — American consumers, family farmers and refiners have suffered under this economically and environmentally destructive policy.

Like other government policies that attempt to pick winners and losers, the RFS creates many of the latter and very few of the former. It's a prime example of the economic phenomenon of concentrated benefits — for corn states in this case — and dispersed costs — thrust upon the millions of other Americans who pay more at the pump without any meaningful benefits for doing so.

At the time of its initial passage — several years before the first iPhone was launched — America's energy outlook was much different, with higher prices at the pump, limited access to domestic supplies, and a deepening reliance on foreign energy sources to meet our increasing demands.

Given the perceived domestic energy scarcity and rising consumer costs, politicians of both parties cast their vote to "grow" more of our energy from corn in our nation's heartland.

But the days of American energy scarcity, thankfully, are gone.

Today, America is a global energy player, poised to become a net exporter. And this has all happened in spite of the RFS, not because of it.

With the United States awash in oil and natural gas, the ethanol mandate is a fundamentally unnecessary policy of yesterday. Yet, faced with these facts and growing frustration from American families and businesses, as well as many across the agriculture community, the Trump administration and some in Congress are considering options to prop up the mandate when they should be finding ways to end it.

So-called "fixes" that have been proposed by some special interests are more government meddling with the fuels that American consumers are forced to use. It's classic Washington. For example, year-round "E-15" (fuel containing 15 percent ethanol) sales give corn growers government-guaranteed market share — or backdoor subsidies — but will harm drivers whose cars weren't built to run on ethanol while charging them more at the pump. Likewise, allowing exported gallons of ethanol to count toward domestic RFS blending requirements provides some relief for the refinery industry, but still

leaves a pseudo-market intact.

These aren't real reforms. They're simply attempts by politicians and an army of special interests to further distort energy and fuel markets. There's no rationale or economic justification to maintain this outdated mandate.

For the sake of consumers, family farmers, refiners and our environment, Washington should end this failed policy once and for all before it does any more harm. The latest so-called fixes to the program will only make matters worse.

Democrats and Republicans both bear responsibility for this disaster. Too many in Washington listen to a small but powerful group of special interests rather than the American people.

Fortunately, an opportunity exists for both parties to listen and be responsive to the people they represent.

It's time for Washington to finally repeal the RFS, get government out of the business of picking winners and losers, and let the free market move our energy economy forward. Enough is enough.

Thomas J. Pyle is president of the American Energy Alliance (@AEA).

# Ethanol policy: A government failure that should stop



## By R Street Institute

lmost everyone reading this is aware that government interventions in the marketplace usually fail. From attempts to limit inflation in the 1970s to the sub-prime housing bubble in 2008, "government failure" is as real a threat to American prosperity as any "market failure" that's occurred in the past

Despite these examples, politicians and their donors always seem willing to introduce new, perverse incentives into the marketplace, usually with good intentions, in order to achieve a short-term outcome.

The current law mandating ethanol use in gasoline is an example of one such government failure. Passed in its current form in 2007, the legislation mandated the blending of corn ethanol into the U.S. gasoline pool to a level of 10 percent to help curb expensive foreign oil imports at a time of very high oil prices. Unfortunately, the law didn't take into account the

potential for technical

hiccups or unintended economic and political consequences.

First, the writers of the Renewable Fuel Standard (RFS) language assumed that gasoline use would continue to grow at a rate of roughly 1 percent per annum. Instead, the 2008 recession caused gasoline demand to decline by 6 percent between 2007 and 2012.

That, in turn, created a glut of ethanol that threatened to damage many older car engines by pushing the level of ethanol above the 10 percent threshold covered by engine warranties.

Second, the law assumed that cellulosic ethanol derived from

non-food plants would be commonplace by around 2015, but researchers were never

able to develop market-ready cellulosic ethanol, mak-

ing

it impossible for refiners to adhere to its ever-rising mandated use.

This situation has forced the Environmental Protection Agency to become a market

intervener on a grand scale, upsetting both refiners and farmers. By some

estimates, the ethanol market redistributes roughly \$7 billion a year to corn growers and distillers from the refining industry, which, in turn, must

try to pass the costs off on consumers. Meanwhile, the fracking revolution has more than doubled U.S. oil production since the mandate was passed, which makes the law irrelevant to U.S. energy

Given that the RFS mandate expires in 2022, it's possible an opportunity to escape this policy maelstrom will present itself. As difficult as it will be to dislodge parts of the farm economy from its governmentcreated ethanol dependence, U.S. consumers will benefit in the end.

security.

R Street Institute is a nonprofit, nonpartisan, public policy research organization. Its mission is to engage in policy research and outreach to promote free markets and limited, effective government. Please follow @RSI.

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**ILLUSTRATION BY LINAS GARSYS** 

# Renewable Fuel Standard is a dead end



### **By Ryan Alexander**

decade ago Congress created the current federal Renewable Fuel Standard (RFS) to jump-start the alternative fuels marketplace. The goal was to spur the production of billions of gallons of cellulosic biofuels derived from perennial grasses, agricultural residues, and other non-food sources. The hope was that blending these biofuels with U.S. gasoline and diesel would significantly reduce harmful emissions and improve U.S. energy security. However, more than 10 years later, it is clear the RFS is hopelessly ineffective.

My organization, Taxpayers for Common Sense (TCS), has opposed the Renewable Fuel Standard since the beginning. The RFS distorts markets by picking winners relying on a system of direct and indirect subsidies primarily to corn ethanol. For nearly four decades, corn ethanol has received billions of dollars in government subsidies.

Instead of creating an on-ramp for non-food-based biofuels, the RFS did little more than provide further support to already heavily subsidized corn ethanol and more recently, soy biodiesel. That's right, the large majority of the RFS mandate has been filled with first-generation, food-based biofuels — the opposite of its purported goals.

These first-generation biofuels may actually increase instead of decrease greenhouse gas emissions. A recent, congressionally mandated report on the RFS concluded that the expansion of corn and soybeans onto grasslands and wetlands since 2007 has also harmed our wildlife, land, air, water and soil. These negative impacts increase costs for consumers, utilities, fishermen, the poor and taxpayers.

Without action to reform the RFS, the situation will continue to get



ILLUSTRATION BY GREG GROESCH



worse. Next year's cellulosic biofuel volume is expected to meet just 4 percent of the 8.5-billion-gallon 2019 cellulosic biofuel mandate, according to the newly released renewable volume obligations while corn ethanol volumes are maxed out at 15 billion gallons.

My organization has worked alongside a broad range of stakeholders, including consumer, environmental, agricultural, food and commodities, motorcycle, fishing and boating interests to highlight the negative consequences and costs of corn ethanol subsidies since their inception four decades ago. The detrimental impacts of skyrocketing corn ethanol production since 2007 include higher food and feed costs as it is diverted to fuel, damage to small engines from higher ethanol use, and higher fuel costs.

On top of the dire impacts from corn ethanol, using palm oil instead of soybean oil for food to make up for the losses created by diverting soybean oil to biofuels could "in turn... increase the lifecycle GHG emissions associated with these incremental volumes," according to the Environmental Protection Agency. EPA elaborates: "There would also likely be market

disruptions and increased burden associated with shifting feedstocks among the wide range of companies that are relying on them today..."

For these and many other reasons, TCS has joined a growing chorus of diverse interests calling on Congress to address the broken RFS mandate and stop picking winners and losers. While the corn ethanol industry promised that decades of subsidies (tax credits, farm bill bioenergy subsidies, ethanol blender pump subsidies, etc.) would lead to better biofuels, corn ethanol has instead proven to be an expensive bridge to nowhere. The sooner Congress realizes the RFS is a dead end, the better for all of us.

Ryan Alexander is president of Taxpayers for Common Sense, a nonpartisan budget watchdog that has served as an independent voice for the American taxpayer since 1995. Its mission is to ensure that taxpayer dollars are spent responsibly and that government operates within its means. Please follow @taxpayers.

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# United States Senate

WASHINGTON, DC 20510

July 26, 2018

Andrew Wheeler Acting Administrator **Environmental Protection Agency** 1200 Pennsylvania Avenue, NW Office of the Administrator, 1101A Washington, DC 20460

Dear Acting Administrator Wheeler:

In recent weeks, media reports indicated that the Environmental Protection Agency (EPA) considered a proposal to retroactively reallocate the Renewable Fuel Standard (RFS) compliance obligations from small refineries, which have received hardship relief, to other refineries and importers. Thankfully, in the proposed rule setting renewable volume obligations for 2019 (the "2019 RVO"), EPA abandoned this ill-considered plan. However, given the requests from biofuel interests, we are writing this letter to state very clearly our strong opposition to any future resurrection of this proposed policy.

There is little doubt that retroactively reallocating obligations would only compound the problems with the RFS. Simply put, a retroactive reallocation of small refinery obligations to other obligated parties is illegal and fundamentally unfair, imposing a financial penalty on refineries that have otherwise been in compliance with the law. By so doing, retroactive reallocation violates the principles of due process and administrative law and is clearly not authorized under the Clean Air Act. Further, retroactive reallocation injects radical uncertainty into the market for compliance credits, hurting the U.S. refining base, its workers, and the communities they serve.

Retroactive reallocation is also inconsistent with sound energy policy. A robust domestic refining sector is a key element to national security, as administrations of both political parties have found. Refineries are a source of high-paying manufacturing jobs, thousands of which are placed at risk when RFS compliance obligations aren't reasonable and when compliance costs escalate. All of this is placed in harm's way if EPA retroactively reallocates the obligations of small refineries, which have received hardship relief. We urge EPA to maintain the policy articulated in the proposed 2019 RVO and not deviate from sound policy and the law by trying to fashion any form of retroactive reallocation. Any other direction undermines national security, threatens higher gasoline prices for U.S. consumers, and risks economic harm to fuel providers and the loss of manufacturing jobs.

Sincerely,

James M. Inhofe d States Senator Orrin G. Hatch - United States Senator Michael B. Enzi - United States Senator John Barrasso, M.D. James E. Risch - United States Senator John Boozman

**Ted Cruz** - United States Senator Bill Cassidy, M.D. - United States Senator **Tom Cotton** - United States Senator David A. Perdue United States Senator **Cindy Hyde-Smith** - United States Senator Johnny Isakson United States Senator Roger F. Wicker

- United States Senator

Joe Manchin III - United States Senator **Pat Toomey** - United States Senator Jeff Flake - United States Senator Shelley Moore Capito - United States Senator James Lankford - United States Senator **Steve Daines** - United States Senator John Kennedy - United States Senator

Michael S. Lee

- United States Senator

**United States Senator**