

POLICY FOCUS

Renewable Fuels

RECIPES FOR RATIONAL GOVERNMENT FROM THE INDEPENDENT WOMEN'S FORUM

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WHAT YOU NEED TO KNOW

In an attempt to improve the environment, cut carbon and greenhouse gas emissions, and reduce American dependence on foreign energy, the United States has established tax incentives and Renewable Fuel Standards, which mandate the use of biofuels, to support the creation and use of biofuels for transportation.

Though few sectors enjoy the benefits of both federal subsidies and federal mandates, it's far from clear that the government's support of renewable fuels has lived up to its promise. Carbon emissions have dropped to their lowest level in two decades, and the United States has become vastly more energy independent—but that's not because of the success of renewable fuels. Rather, as the Institute for Energy Research **points out**, these gains result from new technology that has allowed us to access domestic energy reserves, including natural gas, which produces lower emissions than other traditional energy sources.

Meanwhile, concerns have increased about the unintended consequences of biofuels. In addition to the costs of subsidies for taxpayers, increased use of ethanol has driven up gas prices as well as food prices, both in the United States and around the globe. And scientists are increasingly concluding that the widespread use of biofuels may actually have a net negative impact on the environment.

Instead of pushing forward with unrealistic fuel standards, Congress should roll back these counterproductive mandates and subsidies, encouraging the marketplace to find better solutions to meet America's energy needs.

WHY YOU SHOULD CARE

Renewable Fuel Standards have a major impact on American consumers. Here are a few ways this issue may impact you:

- **Increased fuel costs:** A gallon of ethanol costs more than a gallon of gasoline, and ethanol is also a less efficient fuel. When renewable fuel standards require that gasoline contain a higher percentage of ethanol, we pay higher prices at the pump and get less mileage per gallon.
- **Increased food costs:** With a sizeable share of U.S. corn going to create ethanol, renewable fuel standards have driven up the cost of food. It's not just the price of a cob of corn that's gone up; because corn is often used in livestock feed, many meat and dairy prices have also risen.
- **Increased taxpayer costs:** The federal government gives subsidies and tax credits for the production and use of biofuels. American taxpayers must make up the difference in lost taxes. Meanwhile, rising costs mean more public spending on food-based assistance programs.
- **Environmental concerns:** Ironically, ethanol production requires an extensive agricultural process and emits carbon, and biofuels can emit smog-creating chemicals, which may mean they are often no more environmentally friendly than fossil fuels.

MORE INFORMATION

Government Support of Biofuels

The United States currently supports the use of biofuels through a combination of incentives and mandates.

In 2005, Congress first mandated the use of renewable fuels as part of the Energy Policy Act. And in 2007, as part of the Energy Independence and Security Act, Congress voted to greatly expand this Renewable Fuel Standard, requiring the use of 36 billion gallons of biofuels by 2022, including both corn ethanol and so-called cellulosic biofuel (made from non-edible plant parts like grass, wood and cornstalks), to be blended with transportation fuels.

Congress tasked the Environmental Protection Agency with creating an annual requirement for biofuel usage, bringing the U.S. closer and closer to the ultimate 36-billion-gallon goal. And refiners who fail to match the agency's standards are financially penalized. But—in part because neither engine manufacturing nor ethanol production has caught up to the federal government's pie-in-the-sky ideas about fuel – the EPA is two years behind in issuing its requirements. That means refiners could be penalized retroactively for failing to meet standards that didn't yet exist.

In addition to mandating usage, the United States has also subsidized biofuels on an extraordinary level. Section 1512 of the Energy

Policy Act of 2005 authorized hundreds of millions of dollars in grants for building new biofuel facilities and plants, according to a 2007 report. Though the exact subsidy figures are difficult to calculate, the study found that in 2006 alone, the United States provided between \$5.4 and \$6.6 billion in total support for ethanol and biodiesel, outranking Europe, Canada, Australia and Switzerland. Furthermore, federal support is often combined with local or state subsidies, driving the cost to taxpayers even higher.

But propping up biofuels is nothing new in the United States. Beginning in 1978, the federal government gave a 40-cent tax credit to fuel blenders for every gallon of ethanol they mixed with gasoline. That sum was raised to 51 cents in 2004, then reduced to 45 cents in 2008. Those pennies quickly accumulated into a big chunk of change; the tax credit expired in 2012, but by that time, it had cost the Treasury around \$40 billion, the *Wall Street Journal* has estimated.

These policies supporting the use of biofuels have had significant drawbacks for consumers and have dubious environmental benefits.

Increased Transportation Costs

Historically, a gallon of ethanol has often cost significantly more than gasoline. But even when the price of ethanol is the lower of the two, simple price comparisons don't show the whole picture. Ethanol generates less energy than pure gasoline, meaning cars get fewer miles for each gallon of gas made with ethanol. When comparing the cost

of fuel per mile one can drive, ethanol is far more expensive because it generates only two-thirds the energy as gasoline.

That price spike is significant. The Institute for Energy Research recently **estimated** that Americans pay around \$10 billion extra annually for ethanol in gasoline. That breaks down to about \$47 per consumer per year.

On top of that, engines for the vast majorities of automobiles—not to mention lawn mowers, boats and other gas-fueled equipment—aren't built for biofuels, the Institute for Energy Research notes. So significant is this problem that, when the amount of ethanol in fuel rises beyond 10 percent, car manufacturers quit offering warranties for their vehicles—there's just too much of a risk of engine damage. In addition to paying for more expensive fuel costs, biofuel mandates mean that Americans end up having to spend more to repair and replace machinery.

Effects on Food Costs and Food Security

When it comes to American agriculture, corn is king. It consumes the most harvested acres, and it generates the biggest cash receipts, according to the **Environmental Protection Agency**. No surprise—America's farmers are really good at growing it, producing **20 percent** more corn per acre than any other nation on earth.

But as the government pushes increased use of ethanol, a growing portion of American corn is used for fuel, not for food. Here's the breakdown:

Ethanol consumes roughly 40 percent of America's corn crop; another 40 percent goes to feed animals; 15 percent used in food; and, the rest is sent abroad, **according to** the Congressional Budget Office.

Compliance with the renewable-fuel standards established by Congress drives up the cost of corn. That has an impact on the food supply, both directly and indirectly. Obviously, foods that include corn as an ingredient rise in price as those costs go up. But because so much American corn goes to feed animals, meats and dairy products also become more costly as corn prices climb. As a result, the CBO **estimates**, if the United States moves further toward attaining the standards set forth by law, American consumers will spend an additional \$3.5 billion on food by next year. That's admittedly a small percentage of the \$1.8 trillion Americans will spend on food in 2017, but it's nonetheless a substantial cost households will have to swallow, and it's particularly harmful to low-income families.

As the Renewable Fuel Standard increases the price of food, it also triggers even more unintended consequences that will affect taxpayers. The federal government considers the price of food when it calculates welfare benefits, including for the Supplemental Nutrition Assistance Program (formerly known as food stamps) and its child-nutrition programs. "As a result," the CBO says, "changes in food prices would lead to roughly proportionate changes in spending on such benefits."

The unintended consequences of American support of biofuels also extend far beyond our borders. The price of American corn affects global food markets, leaving them vulnerable to fluctuation, especially when other disruptive factors are at work, such as the 2012 drought, leading to even more hunger and instability.

Environmental Impacts

One of the Renewable Fuel Standards' fundamental goals is to improve the environment and air quality. Unfortunately, a growing body of research calls into question whether the use of biofuels truly has a positive impact.

After examining the empirical research, the Natural Resources Council concluded in 2013 that "although it may seem obvious that subsidizing biofuels should reduce CO2 emissions because they rely on renewable resources rather than fossil fuels, many studies we reviewed found the opposite."

Biofuels have a complicated relationship with emissions. Burning ethanol, for instance, results in less carbon emissions than burning gas—but that doesn't take into account the traditional energy sources that were used to produce biofuels in the first place. Put simply, ethanol may have a much larger carbon footprint than its advocates like to admit.

As Friends of the Earth has **noted**, EPA estimates have low-balled the emissions created while producing corn ethanol by assuming facilities use natural gas, which is less carbon-intensive

than other conventional energy sources. In reality, though, many ethanol-producing plants are powered, in full or in part, with coal. That matters, because, as *Natural Resources Research* noted over a decade ago, “about 29 percent more energy is used to produce a gallon of ethanol than the energy in a gallon of ethanol.”

But that’s not all—ethanol production also generates other hazardous emissions at even greater levels than gasoline. That includes both nitrous oxide and volatile organic compounds, both of which are major contributors to smog, according to the [National Center for Policy Analysis](#) and the [American Enterprise Institute](#).

There are other environmental risks, too. The National Academy of Sciences has [noted](#) that corn requires the use of a relatively large amount of fertilizers and pesticides. And because those chemicals can be absorbed by the land, they pose the risk of infiltrating underground water supplies, or when rinsed as runoff, contaminating waters and streams.

In short, it’s far from clear that the government’s support of biofuels has accomplished the goal Congress had in mind when it enacted the Renewable Fuel Standards. On the other hand, it’s increasingly evident that the mandates and subsidies established to increase the use of biofuels have resulted in a host of unintended economic and environmental consequences, many of which have a direct and negative impact on American consumers and taxpayers.

Cellulosic Biofuels

The EPA’s cellulosic biofuel requirements are among the most unreasonable elements of the Renewable Fuel Standard.

Cellulosic biofuel comes from non-edible plant parts, including corn stalks, wood, grass, and other plant waste. But making cellulosic biofuel hasn’t been economically feasible; it simply costs too much to grow the raw materials and transport them, much less turn them into fuel. By the Institute for Energy Research’s calculations, the cost of oil would have to skyrocket to \$191 a barrel for cellulosic biofuel to compete in the marketplace.

It’s no wonder then, that cellulosic biofuel production remains low. Nevertheless, the EPA has required refiners to use more cellulosic biofuel than the United States actually produces. When refiners failed to meet these unattainable standards, the EPA slapped them with hefty fines in the form of compliance credits.

The result has been both industry outcry and lawsuits. The EPA has adapted by redefining what constitutes cellulosic biofuels to make meeting the standard more attainable, although there still simply may not be enough biofuel to meet the standard. A better solution would be to eliminate this requirement altogether, given its basic impracticality.

WHAT YOU CAN DO

You can help improve American energy policy by pushing back against counterproductive, ineffective government promotion of biofuels.

- **Get Informed:** Learn more about energy and environmental policy. Visit:
 - [The Independent Women's Forum](#)
 - [The Institute for Energy Research](#)
 - [Smarter Fuel Future](#)
- **Talk to Your Friends:** Help your friends and family understand these important issues. Tell them about what's going on and encourage them to join you in getting involved.

- **Become a Leader in the Community:**
Get a group together each month to talk about a political/policy issue (it will be fun!). Write a letter to the editor. Show up at local government meetings and make your opinions known. Go to rallies. Better yet, organize rallies! A few motivated people can change the world.
- **Remain Engaged:** Too many good citizens see election time as the only time they need to pay attention to politics. We need everyone to pay attention and hold elected officials accountable. Let your Representatives know your opinions. After all, they are supposed to work for you!

ABOUT THE INDEPENDENT WOMEN'S FORUM

The Independent Women's Forum (IWF) is dedicated to building support for free markets, limited government, and individual responsibility.

IWF, a non-partisan, 501(c)(3) research and educational institution, seeks to combat the too-common presumption that women want and benefit from big government, and build awareness of the ways that women are better served by greater economic freedom. By aggressively seeking earned media, providing easy-to-read, timely publications and commentary, and reaching out to the public, we seek to cultivate support for these important principles and encourage women to join us in working to return the country to limited, Constitutional government.

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