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Green Watch

Environmental Disaster: The Renewable Fuel Standard

Washington politicians mandate fake "gasoline" made from plants. What could possibly go wrong?

By Marlo Lewis

Summary: *The bipartisan disaster called the Renewable Fuel Standard (RFS) has all the usual characteristics of bureaucratic central planning: It features unrealistic (actually, impossible) goals, hidden taxes and regulatory burdens, and costly "unintended" consequences, and it's carried out by anonymous, unelected, unaccountable government officials. Meanwhile, RFS reduces the mileage of motor vehicles, funnels money from consumers to well-connected "crony capitalists," raises the price of food for the world's poor, destroys rain forest and wetlands, and expands a dead zone the size of Connecticut in the Gulf of Mexico. It was supposed to make us more energy independent. It was supposed to protect the environment, yet it is responsible for converting millions of acres of wetlands and wildlife habitat to corn plantations. Even the "greens" have turned against it. And, like many a horror-movie villain, it's immortal. ... Or* is *it?*

Biofuel is nothing new; Agrol, an ethanol/gasoline blend, was sold in the 1930s. Critics note that mandating such fuel is like putting food into gas tanks.

The Renewable Fuel Standard program was created by the Energy Policy Act of 2005, at a time when Republicans controlled Congress and the White House, and expanded by the Energy Independence and Security Act (EISA) of 2007, with Democrats in control on Capitol Hill. Both parties are responsible for the policy disaster that is the RFS.

The RFS requires that certain volumes of biofuel—corn ethanol, biodiesel (from vegetable oil and animal fat), and so-called advanced biofuel such as cellulosic ethanol (from wood, grass, and inedible parts of plants)—must be blended into motor fuels sold in the United States. A throwback to Soviet-style central planning, the RFS is a textbook study in the law of (supposedly) unintended consequences. Administered by the Environmental Protection Agency (EPA), the program has significant environmental downsides, it inflates food and fuel costs, and it is increasingly unworkable, producing regulatory uncertainty rather than a predictable marketplace.

The original energy-security and "climate science" rationales underpinning the program are dated and, indeed, have been exposed as false. A system of corporate welfare and involuntary servitude, the RFS violates the Constitutional principle of equality under law.

A great idea!

When enacted in 2005 and expanded in 2007, the RFS program was wildly popular among opinion leaders. In the abstract, who doesn't like the idea of replacing "dirty" fuels imported from "unstable or hostile regions" with "clean, home-grown" energy supplied by American farmers? President George W. Bush championed the program's creation and expansion. So did Democratic congressional leaders, and candidates seeking to win the Iowa caucuses, the critical first-in-the-nation presidential campaign contest held in the heart of corn country.

Even oil companies paid lip service to the idea, supporting RFS at first, seeking perhaps to "green" their image or failing to

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foresee that the 2005 RFS mandates would establish the framework for more aggressive efforts to centrally plan the U.S. motor fuel market. At the time, the mandates were more-or-less in line with projected market demand for ethanol as a fuel additive. A few critics such as my Competitive Enterprise Institute colleagues Fred Smith and Myron Ebell warned that the 2005 RFS would prove to be a floor upon which further mandates would be built. They were dismissed as alarmists.

By late that decade, environmental groups such as Friends of the Earth and Environmental Working Group came to view corn ethanol as a "dirty" fuel with worse environmental impacts than the petroleum-based fuel it replaces. Anti-hunger groups such as Action Aid were warning that, by diverting up to 40 percent of the U.S. corn crop into ethanol, the RFS inflated grain prices, increasing the cost of food in import-dependent "developing" (poor) countries.

U.S. livestock producers argued that the RFS contributed substantially to rises in the cost of animal feed, intensifying the harm to their businesses from the 2012 drought, which was the worst in 50 years. Restaurant owners traced rising food costs and job losses to the RFS. Boat owners warned that ethanol is hydrophilic (chemically attracted to water), that water in gasoline kills boat engines, and that engine failure in a storm endangers life and limb.

That year, the major oil industry trade associations, the American Petroleum Institute and the American Fuel and Petrochemical Manufacturers Association, predicted disaster as the RFS forced them to blend and sell biofuel beyond the "blend wall," the practical limit on how much biofuel consumers can actually buy. (Keep that "blend wall" concept in mind; we'll get back to it in a moment.)

Many EPA regulations are controversial, of course. Yet, unlike the agency's recently proposed Clean Water Rule and carbon dioxide (CO_2) reduction standards for existing power plants, the RFS battlelines cut across the usual divisions of party and ideology. On the desirability of abolishing or at least dramatically scaling back the RFS, free-market groups, environmentalist groups, and big oil companies are all on the same side.

The strange-bedfellows coalition of Left and Right, industry, and nonprofit groups, won a significant victory in December 2011, when Congress declined to renew a special tax break for the biofuel industry, the volumetric ethanol tax credit (VEETC). But the main program staggers on, doing great damage. Will the bedfellows achieve real reform—if not under the current Congress and president, perhaps in the next Congress under a new president?

RFS: The basics

The Renewable Fuel Standard, as created in 2005, required that 7.5 billion gallons of biofuel be blended into the nation's motor fuel supply by 2012. Under the follow-up Energy Independence and Security Act of 2007, Congress expanded the RFS, requiring obligated parties to increase the amount of biofuel blended and sold from nine billion gallons in 2008 to 36 billion gallons in 2022. In addition, EISA established new categories of biofuel—conventional (ethanol made from corn kernels), biodiesel, advanced, and cellulosic—each with its own annual target within the total "renewable fuels" mandate.

Here's a quick overview of the program's main features. Refiners, blenders, and fuel importers are "obligated parties" under the RFS—companies required by law to blend and sell biofuel in the U.S. domestic motor fuel market. For them, the RFS is an implicit tax, an unfunded mandate on the private sector. Biofuel companies and the farmers who provide feedstock for biofuel manufacture are clients and beneficiaries. For them, the RFS is a system of corporate welfare, with the government guaranteeing a market for their products.

EPA's main job in the program is to determine obligated parties' annual "renewable volume obligations" (RVOs). RVOs are expressed as percentages, which are calculated by dividing each year's biofuel blending targets by the nation's total projected motor fuel supply. When EPA misses its annual deadline of November 30 for establishing the next year's RFS targets, as has been the case since 2013, obligated parties do not know their RVOs and must guess how much biofuel to buy, blend, and sell.

Again: When the EPA fails to do its job, the companies must *guess* what their obligations will be. **[Here's where the numbers become complicated. Feel free to skip to the next section of this article.]**

The RFS is a credit trading program. Biofuel companies receive a unique 38-digit Renewable Identification Number (RIN) for *each gallon* they produce. When obligated parties buy those gallons, they also buy the RINs. Each RIN remains "attached" to its associated gallon until an obligated party sells the gallon in the motor fuel market. At that point the RIN "detaches" from the gallon. An obligated party may then choose to do one of three things. The company can submit the RIN to EPA to document compliance, but if it over-complies with its RVO, it can either sell its surplus RINs to another obligated party who falls short, or bank the surplus credits to meet up to 20 percent of next year's RVO.

Think of it as a system similar to "cap-and-trade" for carbon emissions.

RIN credit trading was supposed to moderate RFS compliance costs and fuel prices. However, when the blending targets approach the maximum quantity of biofuel the market can absorb, the demand for and price of RIN credits increases. In 2013, RIN prices surged from 7 cents per gallon in January to a dollar per gallon in March, "before receding and then rising to around $1.16/gallon," according to the Congressional Research Service. RIN price increases in 2013 (dubbed "RINsanity" by RFS critics) could increase gasoline prices by 7 cents per gallon, Goldman Sachs estimated, which would equate to a hidden tax on motorists of $11.5 billion.

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Here's where this governmental mess becomes even more complicated. Again, feel free to skip to the next section, or if you do keep reading this section, just imagine yourself as a businessman attempting to comply with the demands of EPA bureaucrats.

Remember those four types of biofuel? The RFS consists of four "nested" volumetric standards, one for each type. Of the 36 billion gallons of renewable fuel required by 2022, at least 21 billion are to be "advanced," of which at least 16 billion gallons are to be "cellulosic" and at least one billion "biomass-based diesel." Up to 15 billion gallons of the 36 billion may come from "conventional" corn-based ethanol.

The "nesting" works as follows. All cellulosic biofuel counts as advanced, and all advanced counts as renewable, but conventional cannot count as advanced, nor can other advanced fuels count as biomass-based diesel or cellulosic. "Conventional" and "advanced" differ in their carbon intensity. Advanced biofuels must emit 50% less carbon dioxide-equivalent (CO_2e) emissions compared to petroleum-based fuels on a "lifecycle" (wells-to-wheels) basis. Cellulosic biofuels must come from nonedible plant materials and emit 60 percent less CO_2e compared to petroleum-based fuels.

The 2007 law authorizes EPA bureaucrats to waive (suspend or reduce) RFS blending targets if they think (1) implementation of the standards would "severely harm the economy or environment of a State, a region, or the United States," or if they think (2) "there is an inadequate domestic supply"—a criterion EPA defines broadly to include not just insufficient production but also all infrastructure, market, and legal constraints "that could result in an inadequate supply of renewable fuel to the ultimate consumers."

In 2008 and 2012, EPA rejected waiver petitions from governors and livestock producers, who argued the RFS harmed state economies by inflating animal feed costs. On the other hand, EPA has repeatedly reduced cellulosic blending targets due to inadequate supply. On November 30, 2013, EPA proposed to scale back overall renewable fuel targets for 2014 on the grounds of inadequate supply. That ignited a firestorm of protest from biofuel interests. EPA dithered for another 18 months before withdrawing the proposal and publishing a new proposed rule on May 29 of this year. The new proposal restores some of the cuts EPA proposed in November 2013 but still scales back the statutory targets for 2014-2016.

"Unintended" consequences

The RFS is a politically mandated 15-year production-quota reminiscent of Soviet-era central planning, and it presents a textbook case of a policy with very bad consequences that sponsors claim they never intended.

We were told that the RFS would be good for the environment, that it would replace "dirty" petroleum fuels with "clean" renewable [*sic*] fuels.

Today, about 40 percent of the U.S. corn crop goes to produce ethanol. According to an Associated Press investigation, RFS-induced expansion of corn production "wiped out millions of acres of conservation land, destroyed habitat and polluted water supplies." About 8.5 million of acres of grasslands and wetlands were converted to corn plantations during 2008-2011, according to the Environmental Working Group. Other farm subsidy programs also played a role, but the RFS was the key driver.

Nitrogen fertilizer runoff from the Corn Belt makes its way down the Mississippi River system to the Gulf of Mexico, where it boosts "the growth of enormous algae fields. When the algae die, the decomposition consumes oxygen, leaving behind a zone where aquatic life cannot survive," the AP reported. In 2013, the dead zone "covered 5,800 square miles of sea floor, about the size of Connecticut."

One of Congress's ostensible purposes in creating the RFS was to reduce greenhouse gas emissions from the U.S. transportation sector. But there's a problem: Growing corn and manufacturing ethanol require fertilizer and energy inputs that emit greenhouse gases. Moreover, when wetlands and grasslands are converted to corn crops, carbon locked in soils is released and forms CO_2. Recent analysis by the Environmental Working Group based on EPA data finds that "last year's production and use of 14 billion gallons of corn ethanol resulted in 27 million tons more carbon emissions than if Americans had used straight gasoline in their vehicles."

Another ostensible purpose of the RFS was to alleviate consumers' pain at the pump by increasing competition between types of fuels. However, the RFS increases refiners' cost of manufacturing, and some portion of that cost is passed on to consumers.

More importantly, ethanol has *one-third less energy than gasoline* by volume, so consumers must buy more gallons to drive the same distance. Economist Tom Elam estimates that in 2011, "the higher cost of ethanol energy compared to gasoline added approximately $14.5 billion, or about 10 cents a gallon, to the cost of U.S. gasoline consumption."

By increasing the price of corn, and of other commodities that compete with corn, and of animal feed, the RFS increases the prices consumers pay for eggs, poultry, beef, and dairy products, both at the supermarket and at restaurants. Experts disagree as to the size of those impacts. Estimates depend on assumptions about how much ethanol would be produced in the absence of a mandate, and how much influence corn prices have on other food costs. A Price Waterhouse Cooper's study for the National Council of Chain Restaurants estimates price increases for corn, wheat, barley, soybeans, potatoes, beef, poultry, pork, and eggs under different scenarios (ranging from one billion gallons of total ethanol supply in 2015 to six billion gallons). In the six-billion-gallon scenario, the increase in food prices is huge (*see chart at left)*.

Price increases (6b scenario)

Corn	26.8%
Wheat	12.1%
Barley	14.4%
Soybeans	15.7%
Potatoes	13.0%
Beans	4.4%
Rice	5.7%
Sugar	0.5%
Beef	7.5%
Poultry	7.7%
Pork	15.0%
Eggs	11.2%
Milk	2.4%

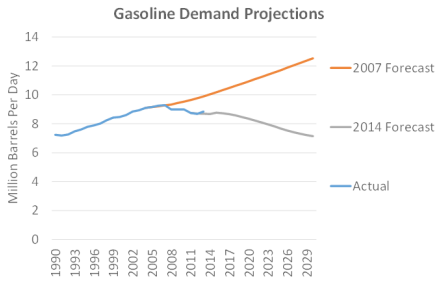
Biofuel lobbyists deny that the RFS has a substantial impact on food prices, which could be true only if the mandate has little impact on biofuel production and the associated demand for corn. Yet the same lobbyists decry any reduction in RFS blending targets, let alone their repeal, because the lower demand

would be a disaster for their industry. It's hard to make sense of their alarms unless the RFS boosts ethanol and corn production substantially above free-market levels.

National security

The Renewable Fuel Standard was supposed to enhance U.S. energy security by providing a home-grown alternative to petroleum imports. As it turns out, what most undercuts OPEC's alleged market power to curb global oil supply and drive up motor fuel costs is not the RFS but the North American revolution in unconventional production of petroleum from shale formations and oil sands.

Moreover, the RFS may actually undermine U.S. security objectives. The USA is the world's largest producer and exporter of corn, and even small increases in commodity prices can inflict hardship on people in developing countries who depend on imported grain. Tufts University economist Timothy Wise estimates that U.S. and European biofuel policies cost developing countries $6.6 billion in higher food costs between 2005-6 and 2010-11.



Yaneer Bar-Yam of the New England Complex Systems Institute finds that "the timing of violent protests in North Africa and the Middle East in 2011 and of earlier riots in 2008 coincides with large peaks in global food prices." The peaks emerge from high "background" grain prices, which Bar-Yam attributes to "corn to ethanol conversion." In other words, in addition to being a failed Global Warming solution, the RFS may have contributed to the very sort of political instability that environmentalists blame on Global Warming.

Missed deadlines

On May 29, EPA proposed RFS blending targets for 2014, 2015, and 2016, and expects to complete the rulemaking by November 30. If so, EPA will be "only" two years late finalizing the 2014 targets and one year late finalizing the 2015 targets. In fact, EPA has missed its deadline *each year since 2009*. Consequently, if EPA finalizes the 2014-2016 targets in November, refiners, blenders, and fuel importers will not have known their compliance obligations *more than half the time* over the preceding 72 months, according to commodities analyst Dave Juday.

This is a big deal not just for refiners, blenders, and fuel importers, but also for corn growers, biofuel producers, livestock producers, and engine manufacturers, all of whose business plans are directly or indirectly affected by the annual RFS production quota. EPA's missed rulings "contribute to industry uncertainty, which can increase costs because industry cannot plan and budget effectively," according to the federal Government Accountability Office.

Why can't EPA just set each year's targets by November 30 of the preceding year, as required by statute? The root cause is not bureaucratic laziness but the nature of the RFS as a central planning scheme. The RFS sets goals that depart from marketplace realities. At the same time, the RFS politicizes the market in which EPA must attempt to make mid-course corrections.

Congress's stated purpose in establishing the 15-year production quota scheme for biofuel in 2007 was not just to prove that U.S. planners are smarter than the commissars of old, who imposed only five-year plans. Nor was it simply to provide corn growers with corporate welfare for life.

Part of the thinking, we were told, was that a 15-year plan would facilitate long-term business planning and investment. All the relevant economic actors would know long in advance what was expected of them, so all could plan accordingly and the biofuel market would grow in a predictable, orderly fashion. Or so the 110th Congress and the Bush administration assumed.

But here too the RFS backfired. The program not only demands the sale of billions of gallons of cellulosic ethanol, even though *virtually no commercial supplies exist*. It also demands that refiners *blend more ethanol than can actually be sold*. And the gap between statutory targets and market conditions grows from year to year.

As noted, EPA has authority to adjust the targets due to "inadequate domestic supply." But the program's obligated parties and clients do not agree on how much biofuel the market can absorb, or even how to interpret the waiver provision language. So the affected interests intensely lobby EPA, the White House, Congress, and the media to influence the agency's final determination of the blending targets. Increasingly, each year's targets are decided—or are left undecided—by EPA staff in a pressure cooker of interest-group lobbying and electoral calculation.

As the great free-market economists Ludwig von Mises and Friedrich Hayek would have predicted, the RFS experiment in central planning produces regulatory uncertainty and market unpredictability.

Let's briefly examine the market conditions that require EPA to adjust the RFS targets in a political context of interest-group lobbying.

The blend wall

The RFS mandates continually increasing quantities of biofuel in the nation's motor fuel supply over a 15-year period, but the market is barely able to absorb current production. The maximum that the market can absorb is called the "blend wall."

The first factor is the overall size of the motor fuel market. The federal Energy Information Administration (EIA) estimates that the total U.S. gasoline supply in 2014 was about 136 billion gallons. Nearly all gasoline sold in the U.S. is E10, or motor fuel blended with ten percent ethanol. That means that the maximum amount of ethanol that can be sold as E10 is one-tenth of 136 billion gallons, or 13.6 billion gallons. The statutory target for conventional biofuel in 2014 is 13.4 billion gallons, which butts right up against the blend wall. Add in the 3.75 billion gallon statutory target for advanced biofuels, and the overall target exceeds the blend wall by about 3.5 billion gallons.

Although the sponsors of the RFS provisions in EISA, the 2007 legislation, were aware of the problem we now call the blend wall, they did not foresee how quickly the

theoretical problem would become reality. In part, they underestimated the effects of improved fuel economy, which has tamped down overall motor fuel demand even as U.S. population has increased.* In addition, demand is depressed due to the continued sluggishness of the economy.

Do the math. The lower the demand for gasoline and other motor fuels, the lower the production of those fuels—and the greater the portion that must come from biofuel if biofuel targets are to be met.

As the American Petroleum Institute and the American Fuel & Petrochemical Manufacturers explained in a recent letter to EPA Administrator Gina McCarthy, when Congress enacted EISA in 2007, the Energy Information Administration forecast that demand "would continue to increase to 156 billion gallons in 2015 and 172 billion gallons in 2022." That meant that E10—motor fuel blended with 10% ethanol—would suffice to meet statutory targets, at least for 2014 and 2015. But things didn't work out that way. In EIA's most recent forecast, gasoline demand is 11 percent lower for 2015 and 26 percent lower for 2022 than in the 2007 projection.

Bad for your vehicle

The second factor determining the blend wall is a set of practical constraints on how much ethanol can be blended into each gallon of motor fuel sold. Warranty and liability concerns, lack of compatible fueling infrastructure, and, most importantly, anemic consumer demand effectively limit the standard blend to E10.

EPA approved the sale of E15 (motor fuel blended with 15 percent ethanol) in October 2010. If E15 were now the standard blend, refiners could sell 50 percent more ethanol than the E10 blend wall allows, which means they could easily meet the statutory RFS targets for 2014-2016. But factors beyond both refiners' control and EPA's jurisdiction severely limit sales of E15:

►E15 is incompatible with most vehicles on the road and using it can void the warranties of many vehicles older than Model Year 2014.

►To handle E15 and higher blends, service stations must install new blender pumps and storage tanks or, at least, modify existing pumps and tanks. Installing new equipment would be a significant expense for most stations, which are small businesses operating on thin profit margins. The National Association of Convenience Stores (NACS) estimates that the cost of a new fuel dispenser is about $20,000. Since the average store has four dispensers, "the cost could be as much as $80,000 to upgrade the dispensers alone." Replacing underground storage tanks and other related costs "would increase expenses significantly."

►There is virtually no consumer demand for E15, and for good reason. Although ethanol has a market value as an octane-boosting fuel additive, its value as a motor fuel is far more limited, because it decreases fuel economy (about which, more below).

Based chiefly on blend wall arithmetic, EPA in November 2013 proposed to trim the overall 2014 statutory target from 18.15 billion gallons to 15.21 billion gallons. That's a 16 percent cut. Biofuel interests were hopping mad. As mentioned, EPA published a revised proposal on May 29; now the cut's set at about 12 percent.

By 2016, the amount set in the EISA law was 22.25 billion gallons. Under EPA's May 29 proposal, it would be 17.4 billion gallons, or 22 percent lower than originally planned.

Here. in the chart at right/below, are the figures for the May 29 proposal.

Note: The 2016 target will exceed the E10 blend wall by about 840 million gallons. EPA assumes that up to 600 million of those gallons can be sold via increased sales of E85—motor fuel blended with 85% ethanol. In a coordinated move timed to coincide with EPA's proposal, the U.S. Department of Agriculture announced plans to spend $100 million to subsidize installation of E85 blender pumps at service stations. However, this strategy is at best a stopgap measure. By 2017 or sooner, the blend wall will again constrain the biofuel market, and EPA will have to make additional cuts in the RFS mandates.

Proposed Volume Requirements[a]

	2014	2015	2016
Cellulosic biofuel (million gallons)	33	106	206
Biomass-based diesel (billion gallons)	1.63	1.70	1.80
Advanced biofuel (billion gallons)	2.68	2.90	3.40
Renewable fuel (billion gallons)	15.93	16.30	17.40

Biofueling demagoguery

Biofuel lobbyists such as Renewable Fuels Association CEO Bob Dinneen claim the blend wall exists only because the oil industry has "steadfastly refused" to invest in blender pumps, storage tanks, and other infrastructure compatible with E15-and-higher ethanol blends. Weirdly unexplained is why it's not the biofuel industry's responsibility to pay for the infrastructure on which its success supposedly depends. If latent consumer demand for E15, E30, and E85 is as big as they say, why don't they invest in the retail infrastructure to provide it? The RFS compels refiners to buy biofuel, process it (that is, add value to it), and sell it to retail outlets. Isn't that enough?

The RFA also accuses "Big Oil" of using supply contracts and franchising agreements to keep E15 and E85 out of retail outlets. Allegedly, this occurs when refiners negotiate contracts with retailers requiring the latter to purchase regular and premium gasoline or all three grades including midgrade. If the station only has pumps and storage tanks for those grades, there are none left over to provide the high ethanol blends consumers supposedly want.

This allegation, however, merely restates in conspiratorial terms one of the market realities noted above, namely, that blender pumps and storage tanks aren't free. As one industry expert explained to me, more than 95 percent of gas stations are independent businesses, and more than 50 percent are unbranded, single-station operations. Federal law already prohibits supply contracts

*__Editor's note:__ Politicians claim that this increase in miles-per-gallon can be credited to government-imposed fuel-economy standards. They don't mention that such technology would have developed anyway in response to consumer demand, although arguably not as fast, because consumers might have preferred that priority be given to other improvements or to keeping down vehicle prices. They don't mention that the government standards, by driving up the price of vehicles, made it harder for people to buy new vehicles—which kept older, less "clean" vehicles on the road longer. And they don't mention that vehicle manufacturers, under government pressure, reduced the size of vehicles to a greater degree than consumers wanted, making the vehicles less safe and, according to various studies, literally killing tens of thousands of people. *–SJA*

from barring the sale of higher ethanol blends. Franchisees and other retail outlets just need to invest in the necessary equipment, or partner with biofuel interests willing to risk their own capital.

Consumers aren't dumb

The root cause of the blend wall is not any alleged oil industry skullduggery but the inferior consumer economics of E85 and other high ethanol blends. Ethanol contains about two-thirds the energy of an equal volume of gasoline. *The higher the blend, the worse mileage your car gets*, and the more you have to spend to drive a given distance.

FuelEconomy.gov, a Web site jointly administered by EPA and the Department of Energy, calculates how much a typical motorist would spend in a year to operate a flexible-fuel vehicle with either E85 or regular gasoline. The exact bottom line changes as gasoline and ethanol prices change and depending on the model in question. The agencies estimate fuel expenditures for each of 238 flex-fuel vehicle models. The big picture, though, is always the same: E85 is a big net money loser for the consumer.

At current prices (early June), the typical owner of a flex-fuel vehicle would spend an extra $850 to $1,900 annually to operate the vehicle on E85 instead of regular gasoline. An example:

So even if every gas station has an E85 pump, consumers will avoid the fuel in droves, because it is a bad buy. Lower energy content, inferior fuel economy, and higher consumer cost are the root cause of the blend wall. The same factors also explain why the "choice" to buy ethanol must be mandated.

My best guess is that in 2017 or sooner, EPA will be back to square one. Lack of consumer acceptance is a market barrier that neither regulatory fiat, corporate welfare, nor anti-oil demagoguery can overcome.

Fuel that doesn't exist

Although the blend wall is the principal market condition compelling EPA to adjust EISA biofuel targets, "phantom fuel" is also a problem.

As mentioned, cellulosic biofuel is the kind made by wood, grass, and inedible parts of other plants. The EISA law of 2007 mandates the blending and sale of annually increasing quantities of cellulosic, maxing out at 16 billion gallons in 2022. For years, however, the biofuel industry produced little to no cellulosic fuel. Nonetheless, for failing to provide such fuel to consumers, obligated parties had to spend millions of dollars buying credits to avoid paying even more costly fines. That's right: They had to spend a small fortune to avoid being fined for not using fuel that didn't exist.

In his 2006 "addicted to oil" State of the Union speech, President George W. Bush predicted that, with government support, cellulosic fuels would become "practical and competitive within six years."

(When was the last time that a political prediction about government-mandated technology came true? And when was the last time anyone was held accountable for making a preposterous prediction about such things?)

The EISA required obligated parties to sell 100 million gallons of cellulosic ethanol in 2010, with the amount rising each year, reaching one billion gallons in 2013. Reality repeatedly forced the EPA to reduce the mandated quantities (to 6.5 million gallons in 2010, *falling* to six million gallons in 2013).

Even those symbolic targets proved to be overly ambitious. In 2012, only 20,000 gallons of cellulosic were produced; in 2013, less than one million. The statutory cellulosic target for 2014 is 1.75 billion gallons. EPA is proposing a 2014 target of 33 million gallons—the amount actually produced last year.

In case your eyes have glazed over by now, I'll do the math for you: The proposed 2014 target is *less than 1.9 percent* of the amount the politicians mandated in 2007. The Washington geniuses strike again!

It is still unclear whether cellulosic ethanol is commercially viable. In October 2012, British Petroleum canceled plans to build a $300 million cellulosic ethanol plant in Highlands County, Florida. In November 2014, cellulosic biofuel producer KiOR, a company backed by billionaire investor Vinod Kohsla, defaulted on loan payments and filed for Chapter 11 bankruptcy protection. Cellulosic and corn ethanol are chemically indistinguishable, and it is easier and cheaper to produce ethanol from corn starch than from plant fiber.

Most of the 33 million gallons of "cellulosic" biofuel produced last year was actually compressed natural gas (CNG) made from landfill waste. Although apparently profitable to produce, the fuel is of use only to vehicles that run on CNG, which is a tiny sliver of the total U.S. motor vehicle market (less than one-thousandth of all registered highway vehicles).

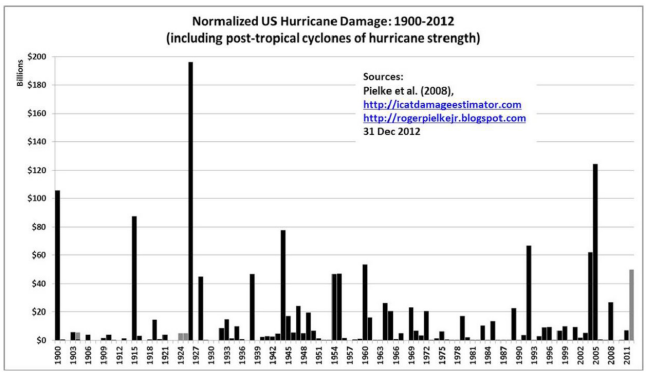
Ironically, the abject failure of the cellulosic mandate is arguably the only thing that prevents the entire RFS program from imploding. If biofuel companies were actually meeting the EISA cellulosic targets and on track to produce nine billion gallons during 2014-2016, rather than the 345 million gallons EPA is proposing (a whopping 3.8 percent of the original targets), renewable fuel production would hugely exceed the blend wall, ethanol prices would crash, and many biofuel companies would go out of business.

Honk if you like central planning!

Obsolete rationales

Congress enacted the Renewable Fuel Standard in 2005 and expanded it in 2007. That period was a high watermark of U.S. oil

import dependence. The expert consensus at the time held that America was fated to become ever more dependent on imported oil and natural gas.



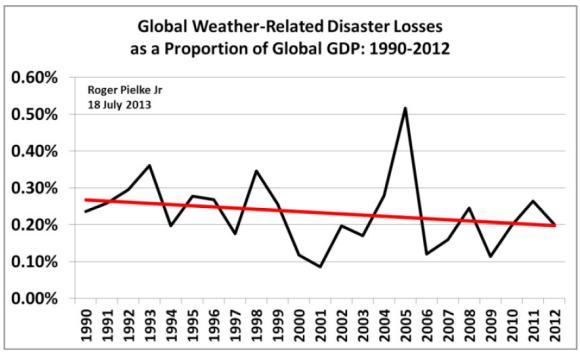
During those years, the terms of the national debate on Global Warming / Climate Change was set by Vice President Al Gore's *An Inconvenient Truth*, the Bali Road Map (the international plan that was supposed to lead to a Global Warming treaty), anxieties related to Hurricane Katrina and the devastation of New Orleans, and the work of the United Nations Intergovernmental Panel on Climate Change.

The tenor of the times was, in a word, alarmist. Fear of "peak oil" (the false prophecy that oil extraction would soon begin an irreparable decline) merged with fear of climatic disruption to produce a policy, the RFS, that aimed both to reduce U.S. oil dependence and mitigate global climate change. Since then, advances in unconventional oil and gas production—advances that occurred over the vehement opposition of the Left—have transformed North America into a major hydrocarbon producing region. Imports as a share of U.S. petroleum consumption declined from 60 percent in 2005 to 40 percent in 2012 and 27 percent in 2014.

And as the imported portion plummeted, the source of the imports shifted. By 2014, nearly three times as big a share of imports came from Canada (37 percent) as from Saudi Arabia (13 percent). Analyses by Citibank, Wood McKenzie, and IHS Global Insight support the assessment of energy analyst Mark Mills that "unleashing the North American energy colossus" could create millions of new jobs by 2020 and provide hundreds of billions in cumulative new federal, state, and local tax revenues.

Yesteryear's gloomy prognostications of depletion, dependency, and decline have been supplanted by visions of a bright future for carbon-based energy.

Today, as we approach 19 years of no recorded Global Warming, the "climate change" rationale for RFS has likewise collapsed. We were supposed to be worried about the increase in hurricane damage from "climate change," but when damage data are "normalized" (adjusted to account for inflation and increases in population and wealth), there is no such increase.



In fact, as a percentage of global GDP, "normalized" extreme weather-related damages have declined by 25 percent since 1990.

Despite an overall warming trend of eight-tenths of a degree Celsius during the past century, the death rate related to extreme weather has declined by 98 percent. The death rate related to drought, historically the leading climatic killer, has declined by 99.9 percent. Meanwhile, yields of all major food crops have increased every decade since the 1950s.

In 2007, politicians relied on "experts" with ideological agendas rather than on common sense and real science. The RFS monstrosity is one result.

Unjust privilege

The RFS program violates a core constitutional principle: equality under law.

In a free society, law treats people as equals. People in certain professions (physicians, for example) are bound to render service to persons in need regardless of ability to pay. But no business in a free society is bound to buy products from another business, add value to the other business's products, or make a market for those products, except on the basis of voluntary contracts or agreements.

The RFS literally compels one industry to purchase, process, and sell other industries' products. It obligates one group of companies (refiners) to expand the market for competitors' products (biofuel producers, corn farmers). It obligates one set of companies to ensure the success of another set of companies' business plans.

Imagine the howls from RFS supporters if Congress were to compel corn farmers to blend their produce with annually increasing quantities of wheat, soybeans, or rice. Imagine the outcry if Congress imposed on corn farmers a 15-year plan establishing volumetric targets for the purchase of certain types of inputs (seeds, fertilizers, pesticides, harvesting machinery, etc.). At the next hearing on the RFS, lawmakers should ask witnesses from the biofuel industry: Do you favor government central planning in general, or only when it rigs the market in favor of your industry?

A growing number of lawmakers on Capitol Hill seek to "reform" RFS, to phase it out or scale it back. Now is the time to take a stand against the special interests who continue to support this disastrous program.

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GW

GreenNotes

Leftist scientists often make fools of themselves when they become involved in public policy. The political arm of the **American Association for the Advancement of Science** backed **Hitler** at the outset of World War II, and scientists have been leading supporters of Prohibition, white supremacy, and eugenics—and Global Warming theory. One reason for this pattern of error is that most leftist scientists (and leftists claiming to be scientists) don't really understand politics. **Bill Nye**, an engineer whom the media call a scientist because he played "The Science Guy" on a children's TV show, is often put forth as an expert on Global Warming. He declared recently that "denying climate change" is "unpatriotic" because "Article I, Section 8 of the **Constitution** says the government shall 'promote the progress of science and useful arts.'" In fact, that section refers specifically (and solely) to patents and copyrights--and, in any event, attempting to shut people up by calling them "unpatriotic" does nothing to promote science.

From the campaign trail: **U.S. Sen. Bernie Sanders** of **Vermont**, an independent socialist who caucuses with **Democrats**, says that he believes the world's problems, including Global Warming, are caused by too much economic growth and too many choices. "You can't just continue growth for the sake of growth in a world in which we are struggling with climate change and all kinds of environmental problems," he told a **CNBC** interviewer. "All right? You don't necessarily need a choice of 23 underarm spray deodorants or of 18 different pairs of sneakers when children are hungry in this country."

Also running for President: **U.S. Sen. Lindsey Graham** (R-S.C.). Graham takes some positions that set him apart from most Republicans. For example, he supports a carbon tax that would apply not just to pollution but to carbon dioxide, a gas that makes life, as we know it, possible on earth. In his announcement speech, he said, "If I'm president of the United States, we're going to address climate change, CO2 emissions in a business-friendly way," which he previously defined as reducing carbon dioxide and "mak[ing] money doing so."

Warmism is undeniably a path to riches for some. The businesses of billionaire **Elon Musk** have received at least $5 billion in taxpayer subsidies, according to the ***Los Angeles Times***, while **Al Gore** has become mega-wealthy as an advocate of Warming theory. In his speech, Graham apparently referred to the imaginary statistic that 97 percent of scientists believe in Global Warming theory by asking, "When 90 percent of the doctors tell you you've got a problem, do you listen to the one?" (that is, to the skeptic). Not surprisingly, **Fred Krupp**, president of the left-wing **Environmental Defense Fund**, co-hosted a fundraiser for Graham in April 2014.

All prospective **Democratic** presidential candidates are anti-science on the Warming issue. In contrast, some **Republican** candidates—**Gov. Scott Walker** of **Wisconsin** and **Sens. Marco Rubio** of **Florida**, **Ted Cruz** of **Texas**, and **Rand Paul** of **Kentucky**—have signed the "No Climate Tax" pledge sponsored by **Americans for Prosperity**.

There are others in addition to Graham who seek to lure Republicans into embracing Warming. **North Carolina** businessman **Jay Faison**, founder of **SnapAV**, an audio-visual equipment company, provided $165 million to endow a foundation, **ClearPath**, and another $10 million on a 501(c)(4) lobbying/campaign organization. "We want to move people away from 'Are we causing it?' and into the, 'How are we going to solve it?'" he said. Former **U.S. Rep. Bob Inglis** (R-S.C.), a subject of the August 2013 *Green Watch*, said of Faison, "I think he can be the **Tom Steyer** of the Right on climate change," a reference to the billionaire who's using his wealth to eliminate opposition on the issue within the Democratic Party. According to ***Politico***, Faison has contributed $25,000 to Graham's campaign and $50,000 to the PAC of former Florida **Gov. Jeb Bush**, who recently declared, "we need to work with the rest of the world to negotiate a way to reduce carbon emissions."

The **American Enterprise Institute**, the **R Street Institute**, the **Niskanen Center**, the **Green Tea Coalition**/**Conservatives for Energy Freedom**, the **Christian Coalition** and its sister group, **Young Conservatives for Energy Reform**, and **ConservAmerica** (formerly **Republicans for Environmental Protection**) are among those promoting "green" positions within the GOP and/or the conservative movement.

Flashback: "The weather seems to have gone berserk lately. The tennis courts at Wimbledon in **England** have not been as parched since the 1920s. The same is true for croplands in northern **France**, the **Soviet Union**, **Minnesota** and the **Dakotas**. It's so dry, brush fires have started several weeks early in **California**, and water is being rationed. As a result, **Dr.** [**Iben**] **Browning** and other previously ignored climatologists are getting a lot of attention. Projections that they made years ago appear to be coming true. They believe that the earth's climate has moved into a cooling cycle, which means highly erratic weather for decades to come. And that, they say, has profound implications—most of them bad—for world food production, economic stability, and social order." That's from the ***New York Times***, July 12, 1976. Thank goodness we were warned about Global Cooling!