



THE HIDDEN CORN ETHANOL TAX

How Much Does the
Renewable Fuel Standard
Cost Motorists?

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EXECUTIVE SUMMARY

Federal legislators are considering an increase in the federal gasoline tax, from the current 18.4 cents per gallon to 33.4 cents per gallon. Before legislators consider raising the gasoline tax, they should first repeal a hidden tax on gasoline: the Renewable Fuel Standard (RFS). This paper finds that:

- Since 2007, the RFS, which requires fuel retailers to blend corn ethanol into the gasoline they sell, has saddled American motorists with more than \$10 billion per year in extra fuel costs above what they would have paid if they had purchased gasoline alone.
- The RFS is a de facto tax on motorists because it requires them to consume ethanol, which, on an energy-equivalent basis, is significantly more expensive than gasoline. Since 1982, on average, ethanol has cost 2.4 times more than an energy-equivalent amount of gasoline.
- For eight full years—1986, 1987, 1988, 1989, 1992, 1994, 1997, and 1998—ethanol cost at least three times more than an energy-equivalent amount of gasoline.

I. INTRODUCTION

The recent collapse in crude oil prices has led to a corresponding decline in gasoline prices. Today's gasoline prices are more than \$1 per gallon cheaper than they were a year ago.¹ Falling fuel prices have fueled a push in Congress for an increase in the federal gasoline tax, which currently stands at 18.4 cents per gallon. One proposal calls for a near-doubling of the tax, to 33.4 cents per gallon.² Proponents of the increase claim that the move is needed to help fund improvements in roads, bridges, and other infrastructure. In addition, they claim that the tax should be raised because it has not kept pace with inflation and that increased revenues are needed to keep the Highway Trust Fund solvent.

There are numerous arguments to support—and refute—the need for an increase in the gasoline tax. Such arguments are beyond the scope of this paper. But before federal legislators even consider increasing the gasoline tax, they should first repeal the Renewable Fuel Standard—a hidden tax on gasoline that I call the “corn ethanol tax”—which has benefited a small group of farmers and ethanol producers in a mere handful of states.

Indeed, the RFS, which requires corn ethanol to be mixed into U.S. gasoline supplies, is a *de facto* tax on motorists because it requires them to consume ethanol, a fuel significantly more expensive, on an energy-equivalent basis, than gasoline. Although the Environmental Protection Agency has repeatedly delayed issuing guidance on the RFS, the latter will likely require fuel retailers to blend about 13 billion gallons of ethanol into the gasoline they sell to the public in 2015.³

A simple comparison of ethanol and gasoline, which accounts for energy density and cost, will show why the RFS is a bad deal for consumers. First, however, a brief review of the politics behind the RFS is needed.

II. HISTORY

For more than three decades, ethanol proponents have been claiming that producing motor fuel from corn will help the U.S. reduce oil imports and achieve “energy independence.” Subsidies for ethanol began in 1978, the year of the Iranian revolution, when upheaval in Iran reduced that country's oil exports and led to a spike in global prices. Fear about further upheavals in the global oil market provided fodder for farm-state legislators to promote the use of corn ethanol as a substitute for gasoline.

The push for alternative fuels in general, and ethanol in particular, continued over the ensuing decades and reached a peak in the mid-2000s, when Congress passed the Energy Policy Act of 2005, which resulted in the original RFS. That law required 7.5 billion gallons of renewable fuel to be blended into gasoline supplies by 2012. Upon signing the bill into law, President George W. Bush declared that by using ethanol, “[W]e're going to be helping our farmers, and at the same time, be less dependent on foreign sources of energy.”⁴

Shortly thereafter, Congress passed the Energy Independence and Security Act of 2007, which dramatically expanded the RFS by requiring the blending of 36 billion gallons of renewable fuel into gasoline supplies by 2022.⁵ While some of the fuel covered by the revised RFS was to be made from non-corn sources, the law also mandated huge increases in the use of corn ethanol. The result was a surge in investment in ethanol distilleries and production.

In 2005, U.S. ethanol production totaled 3.9 billion gallons. By 2011, it had more than quadrupled, to 13.9 billion gallons.¹⁵ By 2014, America's ethanol sector had more than 200 distilleries operating, with a total capacity of about 15 billion gallons per year.¹⁶ The same year, American producers exported more than 800 million gallons of corn ethanol, about 6 percent of overall U.S. production.¹⁷

AN ETHANOL TIMELINE

1896: Henry Ford's first automobile, the quadricycle, is built to run on 100 percent ethanol.

1908: Ford produces the first Model T, which can run on ethanol, gasoline, or a mix of the two.

1978: The Energy Tax Act of 1978 defines gasohol for the first time: a blend of gasoline with at least 10 percent alcohol by volume. It excludes alcohol made from petroleum, natural gas, or coal and provides a subsidy of \$0.40 for each gallon of ethanol blended into gasoline.

1980: Congress enacts a series of tax benefits for ethanol producers and blenders. It includes the 1980 Energy Security Act, which offers loans to small ethanol producers. That same year, Congress slaps a tariff on foreign ethanol.

1983: The Surface Transportation Assistance Act increases the ethanol subsidy to \$0.50 per gallon. In 1984, the Tax Reform Act increases the subsidy to \$0.60.

1990: Congress passes the Omnibus Budget Reconciliation Act, which cuts the ethanol subsidy to \$0.54.

1995–96: Poor crop yields and rising corn prices lead some farm states to pass subsidies to keep the ethanol industry afloat.

1998: Congress extends the ethanol subsidy through 2007, with promises to cut the subsidy from \$0.54 to \$0.51 by 2005.

2001: Ethanol subsidy cut to \$0.53.

2003: Ethanol subsidy cut to \$0.52.

2005: Congress passes the Energy Policy Act, which requires the use of renewable motor fuel under a new mandate, the Renewable Fuel Standard.

2007: Congress passes the Energy Independence and Security Act, boosting the Renewable Fuel Standard to require that by 2022, 36 billion gallons of renewable fuel, mainly corn ethanol, be blended into domestic gasoline supplies each year.⁶

2010: For the first time, ethanol plants become the biggest consumer of domestic corn, surpassing livestock feed.⁷

2011: Federal subsidies for corn ethanol are eliminated.⁸ The RFS mandates remain in place. Meanwhile, the EPA approves limited use of E15, a fuel containing 15 percent ethanol and 85 percent gasoline.⁹

2012: The American Automobile Association warns motorists not to use E15 because the fuel may damage their vehicles.¹⁰

2013: The National Oceanic and Atmospheric Administration announces that the size of the dead zone in the Gulf of Mexico is expected to be three times its normal size. In response, Larry McKinney, executive director of the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University–Corpus Christi, points a finger at fertilizer used in ethanol production.¹¹

December 2014: After months of delay, the EPA announces that it “will not be finalizing 2014 applicable percentage standards under the Renewable Fuel Standard program before the end of 2014.”¹² In response, House Energy and Commerce Committee chairman Fred Upton (R-MI), along with two colleagues, declares: “EPA cannot just choose to arbitrarily ignore the law and the deadlines established by Congress.”¹³

January 2015: Iowa State University reports that 39 percent of the U.S. corn crop is being diverted to make ethanol.¹⁴

III. CALCULATING THE RFS's COST TO MOTORISTS

The surge in corn ethanol production has attracted plenty of criticism due to its effect on food prices, carbon emissions, and impact on land use.¹⁸ Yet the specific characteristics and cost of ethanol *as a fuel* have garnered far less attention.

Ethanol-blended gasoline has lower energy density than pure gasoline. This means that motorists who buy fuel adulterated with ethanol receive fewer miles per gallon of fuel. The ensuing “mileage penalty” must be paid at the pump through the purchase of additional fuel.

Ethanol contains about 76,000 Btu per gallon while gasoline contains about 114,000 Btu per gallon.¹⁹ Therefore, to get the same amount of energy contained in a gallon of gasoline, a motorist must buy 1.5 gallons of ethanol.

Fueleconomy.gov, a site run by the U.S. government, advises that vehicles running on E10—the most common form of ethanol-blended fuel, containing 10 percent ethanol and 90 percent gasoline—typically receive “3 to 4 percent fewer miles per gallon” than if they ran “on 100 percent gasoline.”²⁰

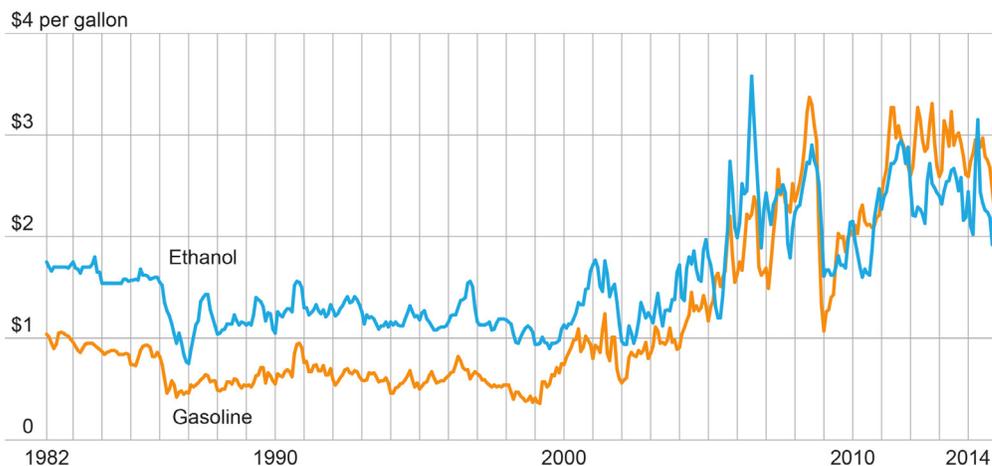
Now consider cost. Since 1982, Nebraska has collected monthly and annual “rack” prices for ethanol and gasoline at fuel depots in Omaha: in December 2014, for example, the rack price of a gallon of ethanol was \$2.40 while a gallon of unleaded gasoline was \$1.73.²¹ Recall, though, that 1.5 gallons of ethanol are needed to match the amount of energy contained in a gallon of gasoline. This means that in December 2014, the actual (i.e., energy-adjusted) price of ethanol was about \$3.60 per gallon, more than twice the cost of a gallon of gasoline.

Nor was that unusual. Since 1982, the price of an energy-equivalent volume of ethanol has, on average, been about 2.4 times the price of gasoline. Further, for eight years—1986, 1987, 1988, 1989, 1992, 1994, 1997, and 1998—ethanol cost at least three times more than an energy-equivalent amount of gasoline.

The disparity in the price of the two fuels is illustrated by Figures 1 and 2. **Figure 1** shows the price of gasoline versus the price of ethanol on a volumetric basis. For most of the past 32 years, Figure 1 reveals, even though ethanol has lower energy density, it has been more expensive than gasoline.

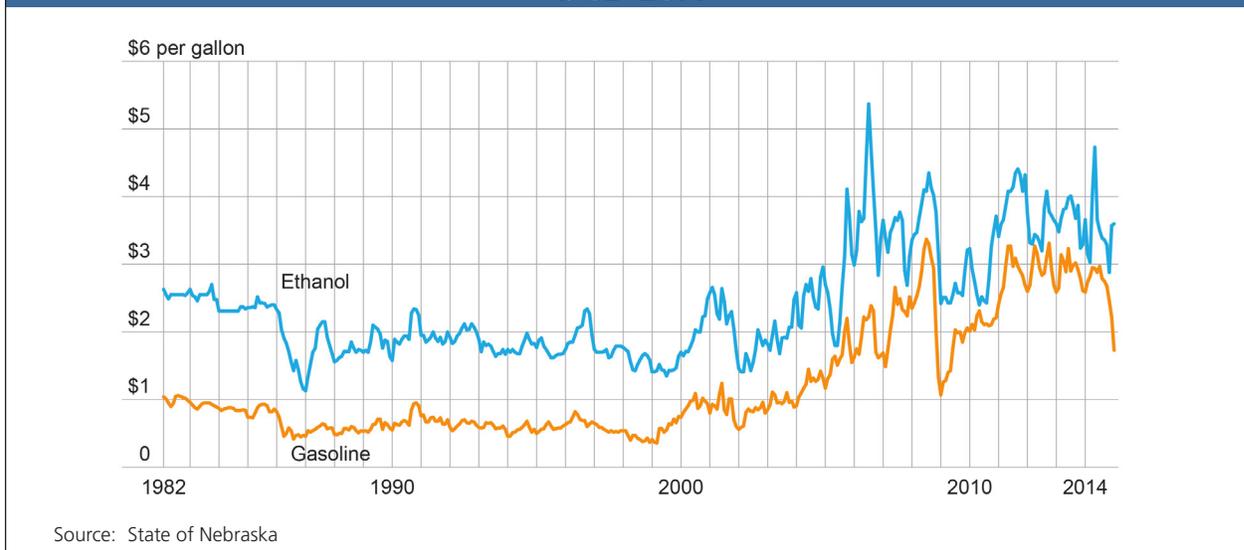
Figure 2 exposes the higher cost of ethanol. It uses the same Nebraska price data as Figure 1—except

FIGURE 1. GASOLINE VS. ETHANOL, PER-GALLON COST, 1982–2014



Source: State of Nebraska

FIGURE 2. GASOLINE VS. ETHANOL, ENERGY-ADJUSTED PER-GALLON COST, 1982–2014



that the ethanol prices have been multiplied by 1.5, so that ethanol can be compared with gasoline on an energy-equivalent basis. The results are easily seen: since 1982, on an energy-equivalent basis, ethanol has *always* been more expensive than gasoline.

The same energy-equivalent price data from Nebraska provide a way to estimate the annual cost of ethanol to motorists. In 2013, a gallon of gasoline sold for \$2.90 while an energy-equivalent amount of ethanol cost \$3.71. Therefore, motorists were required to pay an additional 81 cents per gallon for each gallon of ethanol consumed in 2013. That year, thanks to the RFS, 13.2 billion gallons of ethanol were blended into U.S. gasoline supplies.

Henceforth, the math is straightforward. In 2013, that 81 cents-per-gallon premium multiplied by the 13.2 billion gallons of ethanol sold means that U.S. consumers were forced to pay \$10.6 billion more than they would have, had they purchased gasoline alone.

Between 2007 and 2014, 92.5 billion gallons of ethanol were mixed into domestic gasoline supplies.²² Over the same eight-year period, the energy-equivalent cost of ethanol over gasoline averaged

about 90 cents per gallon. Motorists thus incurred about \$83 billion—roughly \$10 billion annually—in additional fuel costs over and above what they would have paid for gasoline alone.²³

To put this figure in perspective, roughly 212 million Americans are licensed to operate a motor vehicle.²⁴ Given the \$10 billion per-year cost of the RFS mandate, the average U.S. driver pays an additional \$47 per year in excess fuel costs.

IV. WHO BENEFITS FROM THE CORN ETHANOL TAX?

As stated, the biggest advocates for corn ethanol have long been legislators from corn-producing states. Today, the top six ethanol producers—Iowa, Nebraska, Illinois, Minnesota, Indiana, and South Dakota—account for about 67 percent of all U.S. ethanol production.

But just two states, Iowa and Nebraska, are the dominant players. Iowa, with more than 3.7 billion gallons of capacity, accounts for about 25 percent of all U.S. ethanol capacity. The two states combined have some 5.6 billion gallons of ethanol production

capacity, or more than one-third of all American corn-fuel capacity.²⁵

By boosting demand for corn, the corn ethanol tax directly benefits corn farmers. In 2005, when Congress enacted the RFS, the ethanol sector consumed about 1.6 billion bushels of corn, or 14 percent of U.S. production.²⁶ By 2011, that figure had more than tripled, to 5 billion bushels, with ethanol production consuming about 40 percent of all U.S. corn.²⁷

The country's corn ethanol tax can thus be seen as wealth transfer from non-ethanol-producing states to those that make the fuel. Indeed, arguments in

favor of ethanol consumption are regularly couched in terms of helping rural communities, as well as promoting "energy independence." For instance, in 2010, Secretary of Agriculture Tom Vilsack, who served eight years as Iowa's governor, promoted the use of ethanol-blended gasoline by saying that it would help make "America more energy independent" and create "much-needed jobs in rural America."²⁸

V. REPEALING THE RFS

In the last session of Congress, 169 members of the House sent a letter to Gina McCarthy, head of the EPA, urging her to reduce the amount of ethanol

SELECT QUOTATIONS ON ETHANOL

2002: Senator Hillary Clinton (D-NY) signs a letter declaring that the ethanol subsidies were "equivalent to a new tax" on gasoline and that there is "no sound public policy reason for mandating the use of ethanol." Five years later, she visits Iowa as a candidate for president. While there, she announces that the U.S. needs to work on "limiting our dependence on foreign oil. And we have a perfect example right here in Iowa about how it can work with all of the ethanol that's being produced here."²⁹

2003: Senator John McCain (R-AZ) says: "Plain and simple, the ethanol program is highway robbery perpetrated on the American public by Congress." Three years later, McCain visits Iowa as a candidate for president. While there, he calls ethanol "a vital alternative energy source not only because of our dependency on foreign oil but its greenhouse gas reduction effects."³⁰

2005: Senator John Thune (R-SD) says that ethanol "reduces our dependence on foreign sources of oil and is an important weapon in the War on Terror."³¹

2006: Actor Robert Redford says that he supports corn ethanol production: "It's cheaper. It's cleaner. It's renewable. And you know what? It's American because we grow it."³²

2007: In a speech announcing his plan to run for the White House, Barack Obama declares his support for "homegrown, alternative fuels like ethanol."³³

2007: Former CIA director James Woolsey says: "American farmers, by making the commitment to grow more corn for ethanol, are at the tip of the spear on the war against terrorism."³⁴

2007: Senator Richard Lugar (R-IN) calls ethanol "a premier, high performance fuel. It has tremendous environmental benefits and is a key component to energy independence for our country."³⁵

2009: Senator Amy Klobuchar (D-MN) urges the EPA to "raise the amount of ethanol required in regular gasoline to 12 percent or 13 percent with an eventual boost to 15 to 20 percent."³⁶

2012: Tom Buis, CEO of Growth Energy, an ethanol lobby group, states: "Ethanol reduces our dependence on foreign oil ... revitalizes rural communities and saves consumers at the pump."³⁷

December 2014: Buis claims: "Consumers will choose higher blends of ethanol. They're less expensive."³⁸

blended into gasoline supplies because the mandates could cause “economic and environmental harm.”³⁹

The push to end the ethanol mandates has continued with the new Congress. Three senators—Dianne Feinstein, a Democrat from California, along with two Republicans, Patrick J. Toomey of Pennsylvania and Jeff Flake from Arizona—have introduced legislation to repeal the corn ethanol mandate.⁴⁰ Similar moves are afoot in the House. Rep. Bob Goodlatte, a Virginia Republican, introduced another bill aimed at ending the ethanol mandates. Goodlatte’s bill has three cosponsors, including Steve Womack, a Republican from Arkansas, and two Democrats, Peter Welch of Vermont and Jim Costa of California.⁴¹ In a

statement released after introducing his bill, Goodlatte declared: “[It’s time] to stop this boondoggle.”⁴²

VI. CONCLUSION

By requiring the consumption of fuel that is more expensive than gasoline on an energy-equivalent basis, Congress has imposed a de facto fuel tax on American motorists. Before legislators consider an increase to the federal gasoline tax, they should eliminate the Renewable Fuel Standard, which has done nothing for motorists except make their fuel more expensive. Ethanol producers should be required to compete in the motor fuel market based on the quality of their product, not government mandates.

APPENDIX. A PRICE COMPARISON OF ETHANOL AND GASOLINE, 1982–2014

Year	Ethanol	Energy-adjusted price of ethanol	Gasoline	Energy-equivalent ethanol cost multiple over gasoline	Energy-equivalent ethanol price premium over gasoline	U.S. ethanol gallons consumed	Excess cost to U.S. motorists
2014	\$2.34	\$3.51	\$2.66	1.32	\$0.85	13,000,000,000	\$11,050,000,000
2013	\$2.47	\$3.71	\$2.90	1.28	\$0.81	13,180,000,000	\$10,609,900,000
2012	\$2.37	\$3.56	\$2.95	1.21	\$0.61	12,950,000,000	\$7,834,750,000
2011	\$2.70	\$4.05	\$2.90	1.40	\$1.15	12,890,000,000	\$14,823,500,000
2010	\$1.93	\$2.90	\$2.17	1.33	\$0.73	12,860,000,000	\$9,323,500,000
2009	\$1.79	\$2.69	\$1.76	1.53	\$0.93	11,040,000,000	\$10,212,000,000
2008	\$2.47	\$3.71	\$2.57	1.44	\$1.14	9,680,000,000	\$10,986,800,000
2007	\$2.24	\$3.36	\$2.23	1.51	\$1.13	6,890,000,000	\$7,785,700,000
2006	\$2.58	\$3.87	\$1.94	1.99	\$1.93		
2005	\$1.80	\$2.70	\$1.66	1.63	\$1.04	Total 92,490,000,000	\$82,626,150,000
2004	\$1.69	\$2.54	\$1.25	2.03	\$1.29		
2003	\$1.35	\$2.03	\$0.98	2.07	\$1.05	Average ethanol cost premium	
2002	\$1.12	\$1.68	\$0.81	2.07	\$0.87	2007–14: \$0.92 per gallon	
2001	\$1.48	\$2.22	\$0.88	2.52	\$1.34		
2000	\$1.35	\$2.03	\$0.93	2.18	\$1.10		
1999	\$0.98	\$1.47	\$0.59	2.49	\$0.88		
1998	\$1.05	\$1.58	\$0.43	3.66	\$1.15		
1997	\$1.15	\$1.73	\$0.55	3.14	\$1.18		
1996	\$1.35	\$2.03	\$0.69	2.93	\$1.34		
1995	\$1.15	\$1.73	\$0.59	2.92	\$1.14		
1994	\$1.19	\$1.79	\$0.56	3.19	\$1.23		
1993	\$1.16	\$1.74	\$0.59	2.95	\$1.15		
1992	\$1.33	\$2.00	\$0.64	3.12	\$1.36		
1991	\$1.27	\$1.91	\$0.69	2.76	\$1.22		
1990	\$1.35	\$2.03	\$0.75	2.70	\$1.28		
1989	\$1.23	\$1.85	\$0.61	3.02	\$1.24		
1988	\$1.13	\$1.70	\$0.54	3.14	\$1.16		
1987	\$1.21	\$1.82	\$0.57	3.18	\$1.25		
1986	\$1.07	\$1.61	\$0.51	3.15	\$1.10		
1985	\$1.60	\$2.40	\$0.85	2.82	\$1.55		
1984	\$1.55	\$2.33	\$0.85	2.74	\$1.48		
1983	\$1.68	\$2.52	\$0.91	2.77	\$1.61		
1982	\$1.71	\$2.57	\$1.00	2.57	\$1.57		
Average				2.39	\$1.17		

Source for ethanol consumption, 2007–13: <http://www.eia.gov/tools/faqs/faq.cfm?id=90&t=4>

Source for ethanol and gasoline prices: <http://www.neo.ne.gov/statshhtml/66.html>

Source for energy density of ethanol and gasoline: http://www.afdc.energy.gov/fuels/fuel_comparison_chart.pdf

Note: The 2014 ethanol consumption figure is estimated, based on EPA preliminary mixing requirement of 13B gals. See: <http://www.platts.com/latest-news/agriculture/washington/feature-us-ethanol-producers-look-to-exports-21851152>.

ENDNOTES

- ¹ See <http://www.eia.gov/petroleum/gasdiesel>.
- ² See <http://thehill.com/policy/transportation/231740-house-dem-moves-to-double-gas-tax>.
- ³ See <http://www.epa.gov/otaq/fuels/renewablefuels/index.htm>.
- ⁴ See <http://georgewebush-whitehouse.archives.gov/news/releases/2005/08/20050808-6.html>.
- ⁵ See <http://www.epa.gov/oms/fuels/renewablefuels>.
- ⁶ See http://www.eia.gov/kids/energy.cfm?page=tl_ethanol.
- ⁷ See <http://bigstory.ap.org/article/timeline-recent-ethanol-events-0>.
- ⁸ See <http://www.usnews.com/opinion/economic-intelligence/2014/03/11/obamas-2015-budget-backs-costly-corn-ethanol-subsidies>.
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- ¹⁰ See <http://www.usatoday.com/story/news/nation/2012/11/30/aaa-e15-gas-harm-cars/1735793>.
- ¹¹ See <http://pedro.co.za/facetbase1/results/taxonomy%3A50282>.
- ¹² See <http://www.gpo.gov/fdsys/pkg/FR-2014-12-09/pdf/2014-28163.pdf>.
- ¹³ See <http://energycommerce.house.gov/press-release/committee-leaders-respond-epa%E2%80%99s-rfs-announcement#sthash.mK5elnJK.dpuf>; and <http://energycommerce.house.gov/press-release/committee-leaders-respond-epa%E2%80%99s-rfs-announcement>.
- ¹⁴ See <https://www.extension.iastate.edu/agdm/crops/outlook/cornbalancesheet.pdf>.
- ¹⁵ See <http://ethanolrfa.org/pages/statistics>.
- ¹⁶ Ibid.
- ¹⁷ See <http://www.ethanolrfa.org/news/entry/ethanol-expands-global-reach-rfa-releases-new-2014-export-import-report>.
- ¹⁸ For a discussion of ethanol and food prices, see Robert Bryce, Slate.com, July 31, 2012, http://www.slate.com/articles/news_and_politics/food/2012/07/drought_and_ethanol_how_congress_mandates_and_the_epa_s_new_policy_are_hurting_americans_.html. For a discussion of biofuels' carbon emissions, see the 2014 study by the European Union's research agency, the Joint Research Centre. A synopsis is available at <http://www.rtcc.org/2014/03/21/eu-warns-biofuel-carbon-emissions-higher-than-expected>. For a discussion of land use, see January 2015 report by World Resources Institute, <http://www.wri.org/publication/avoiding-bioenergy-competition-food-crops-and-land>.
- ¹⁹ See http://www.afdc.energy.gov/fuels/fuel_comparison_chart.pdf.
- ²⁰ See <http://www.fueleconomy.gov/feg/ethanol.shtml>.
- ²¹ See <http://www.neo.ne.gov/statshtml/66.html>.
- ²² See <http://www.eia.gov/tools/faqs/faq.cfm?id=90&t=4>.
- ²³ For volume and cost data, see Appendix. Note that the 2014 ethanol data is estimated, based on 2013 required volumes. Further, as a test, the author conducted a separate set of calculations to see if his additional fuel-cost estimates of approximately \$10 billion per year were valid. The methodology: find the additional fuel cost for 2012 and 2014, based on reduced E10 mileage of 3%–4%, if that 3%–4% loss had to be made up through additional gasoline sales. The results: in 2012, NACS online put U.S. gasoline use at 360 million gal./day, or 131.4 billion gal./yr. Multiply by the Nebraska gasoline cost of \$2.95/gal. = \$387.6 billion x 0.035 = \$13.56B in additional costs. In 2014, Advisorperspectives.com put gasoline sales at about 340 million gal./day, or 124.1 billion gal./yr. Multiply by Nebraska gasoline cost of \$2.66/gal. = \$330.1B x 0.035 = \$11.5B in additional costs.
- ²⁴ See <http://www.statista.com/statistics/191653/number-of-licensed-drivers-in-the-us-since-1988>; and <https://www.census.gov/compendia/statab/2012/tables/12s1114.pdf>.
- ²⁵ See <http://www.neo.ne.gov/statshtml/121.htm>.
- ²⁶ In 2005, U.S. corn production totaled 11.1 billion bushels: http://www.nass.usda.gov/Charts_and_Maps/Field_Crops/cornprod.asp.
- ²⁷ See <http://www.nppc.org/2012/07/study-supports-need-to-reform-ethanol-production-mandate>.
- ²⁸ See <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2010/10/0520.xml>.
- ²⁹ See Robert Bryce, *Gusher of Lies: The Dangerous Delusion of "Energy Independence"* (New York: PublicAffairs, 2008), 157.

³⁰ Ibid., 155–56.

³¹ See <http://www.thune.senate.gov/public/index.cfm/press-releases?ID=8941b3f2-4139-48cb-8cff-5e49855e0784>.

³² CNN.com, "A Lively Discussion on Rising Oil Prices," May 17, 2006, <http://transcripts.cnn.com/TRANSCRIPTS/060517/lkl.01.html>.

³³ See <http://bigstory.ap.org/article/timeline-recent-ethanol-events-0>.

³⁴ Roy Roberson, "Former CIA Director Says Farmers Leading Terrorism Fight," *Southeast Farm Press*, March 8, 2007, <http://southeastfarmpress.com/grains/030807-farmers-terrorism>.

³⁵ See <https://www.insideindianabusiness.com/newsitem.asp?ID=23500>.

³⁶ See <http://www.growthenergy.org/news-media/press-releases/speaker-pelosi-leads-chorus-calling-for-higher-blends-of-ethanol/#sthash.bZq21p5n.dpuf>.

³⁷ See <http://www.growthenergy.org/news-media/ethanol-in-the-news/growth-energy-same-old-song-from-big-oil/#sthash.yRkgW1q1.dpuf>.

³⁸ See <http://www.chicagotribune.com/news/local/politics/ct-chicago-ethanol-gas-pumps-met-1209-20141208-story.html>.

³⁹ See https://goodlatte.house.gov/system/uploads/293/original/RFS_Letter_to_EPA_Admin_McCarthy.pdf.

⁴⁰ See <https://blog.gasbuddy.com/posts/Senators-introduce-amendment-to-end-corn-ethanol-mandate/1715-598007-2850.aspx>.

⁴¹ See <http://www.welch.house.gov/in-the-news/reuters-four-us-lawmakers-begin-second-effort-at-biofuels-reform-bill1>.

⁴² See <http://goodlatte.house.gov/columns/it-s-time-for-congress-to-end-the-ethanol-mandate>.

