

# Construction of a Fool's Paradise: Ethanol Subsidies in America

John A. Sautter

Laura Furrey

R. Lee Gresham

Follow this and additional works at: <http://digitalcommons.wcl.american.edu/sdlp>

 Part of the [Energy and Utilities Law Commons](#), [Environmental Law Commons](#), and the [Tax Law Commons](#)

---

### Recommended Citation

Sautter, John A., Laura Furrey, and R. Lee Gresham. "Construction of a Fool's Paradise: Ethanol Subsidies in America." *Sustainable Development Law & Policy*, Spring 2007, 26-29, 74-75.

This Article is brought to you for free and open access by the Washington College of Law Journals & Law Reviews at Digital Commons @ American University Washington College of Law. It has been accepted for inclusion in *Sustainable Development Law & Policy* by an authorized administrator of Digital Commons @ American University Washington College of Law. For more information, please contact [fbrown@wcl.american.edu](mailto:fbrown@wcl.american.edu).

# CONSTRUCTION OF A FOOL'S PARADISE:

## ETHANOL SUBSIDIES IN AMERICA

by John A. Sautter, Laura Furrey, and R. Lee Gresham\*

### INTRODUCTION

Ethanol is poised to become one of America's most important renewable energy sources in the near future. A complex web of state and federal subsidies to ethanol producers, refiners, and corn growers supports this fuel. Without these subsidies, America's thriving ethanol trade would not exist. This article outlines the most important laws that provide the financial largesse upon which ethanol production depends—the analysis of the sustainability of ethanol is left to the reader. Rather, the goal of this article is to explain how these laws and policies operate, with the aim of helping the reader understand the strong influence of government intervention throughout all aspects of ethanol production and distribution. In short, this article will demonstrate that American ethanol production has become the business of government.

### RECENT HISTORY OF ETHANOL SUBSIDIES

On October 22, 2004 President Bush signed into law the American Jobs Creation Act. By providing a new excise tax credit system for all ethanol blends and biodiesel, this law significantly changed the way taxes are collected on gasohol (a fuel mixture containing ethanol and gasoline) and other ethanol blends. Effective January 1, 2005, the Act eliminated the reduced rate of excise tax for gasohol blends containing ten percent, 7.7 percent, and 5.7 percent ethanol. It replaces this tax with the Volumetric Ethanol Excise Tax Credit ("VEETC"), a \$0.51 per gallon excise tax credit for each gallon of ethanol blended with gasoline. Additionally, the Act extends the ethanol tax incentive to 2010 and deposits all taxes paid on gasohol and other ethanol blends into the Highway Trust Fund (while the credits are paid for out of the General Fund). Furthermore, farmer cooperatives may now also claim the small ethanol producer tax credit that was created in the Omnibus Budget Reconciliation Act of 1990 under this Act.<sup>1</sup>

### CORN SUBSIDIES

Perhaps most importantly, U.S. taxpayers subsidize the production of corn itself, to the tune of \$51.3 billion from 1995 to 2005, according to the Environmental Working Group.<sup>2</sup> Without these subsidies, no corn-based ethanol would be produced in the United States. The Department of Agriculture reported that corn ethanol's variable production costs are \$0.96 per gallon, with capital costs averaging \$1.57 per gallon. In total, ethanol costs an average of \$2.53 per gallon to produce in the United States.<sup>3</sup> A recent study published by the International Institute for Sustainable Development ("IISD") estimates that U.S. subsidies for ethanol totaled approximately between \$5.1 billion and \$6.8 billion in 2006.<sup>4</sup> These subsidies translate into \$1.05 to \$1.38 per gallon of ethanol, or 42 to 55 percent of its wholesale market price.<sup>5</sup>

### IMPORT TARIFFS

Today, importers of Brazilian ethanol pay a \$0.54 per gallon import duty plus a 2.5 percent tax. This import tariff shields U.S. producers from their Brazilian counterparts, whose sugar-derived ethanol is far cheaper to produce and has higher energy content than corn-based fuel.<sup>6</sup> Even with the tariffs in place, about half of the 160 million gallons of ethanol that the United States imported in 2004 came from Brazil, and Brazil is spending \$ nine billion on new facilities to export even more.<sup>7</sup> This could pay off, as soaring U.S. wholesale prices are making Brazilian imports more competitive with domestic supplies. The import tariff will expire at the end of September 2007, but many federal legislators hope to see it extended<sup>8</sup> because it has generated revenues of \$53 million and \$22 million in 2004 and 2005, respectively.<sup>9</sup> Additionally, a most-favored nation *ad valorem* tariff is applied on imports of un-denatured ethyl alcohol (80 percent volume alcohol or higher) and denatured alcohol.<sup>10</sup> Revenues under the *ad valorem* tariff have been less than eight million dollars per year in recent years.<sup>11</sup>

### VOLUMETRIC ETHANOL EXCISE TAX CREDIT

Enacted in 2004 under the Jumpstart Our Business Strength Act, the VEETC provision is the single largest subsidy to ethanol.<sup>12</sup> VEETC provides a tax credit based on ethanol blended into motor fuel. According to IISD's Global Subsidies Initiative, "[i]t is awarded without limit, and regardless of the price of gasoline, to every gallon of ethanol blended in the marketplace, domestic or imported."<sup>13</sup> The cost to the U.S. Treasury from the subsidy is rising rapidly. In 2005, the Joint Committee on Taxation ("JTC") estimated that tax losses from the VEETC would average \$1.4 billion per year for the period 2005 to 2009.<sup>14</sup> A year later, the JTC's estimate increased more than 50 percent, averaging \$2.2 billion per year for the period 2006 to 2010.<sup>15</sup> The U.S. Treasury estimated an even higher cost value, an average of \$2.6 billion per year from 2005 to 2011.<sup>16</sup>

Actual demand growth, however, is outstripping government estimates. Sales for 2006 resulted in VEETCs worth \$2.5 billion, higher than either the Treasury's or the JTC's projections

---

\*John A. Sautter received his BA from New York University and his Ph.D. from the University of Nebraska-Lincoln. Laura Furrey received her B.S. from California Polytechnic State University - San Luis Obispo and is a licensed professional civil engineer in the state of California. Lee Gresham received his BA from the College of the Holy Cross and is currently a Ph.D. student at Carnegie Mellon's School of Engineering and Public Policy. All three are research associates at the Vermont Institute for Energy and the Environment at Vermont Law School in South Royalton, VT. The authors would like to thank the Tamarind Foundation for its financial support for the research leading to this article.

for the year.<sup>17</sup> Demand is expected to continue to grow greatly during the coming years. Projecting the cost of the VEETC provision is difficult in such a quickly expanding market, but the Renewable Fuel Standard mandates “provide one stable benchmark against which to estimate VEETC subsidies.”<sup>18</sup> Presupposing that the nation will meet these targets, revenue losses will increase to \$3.8 billion a year by 2012, when 7.5 billion gallons of ethanol must be expended.<sup>19</sup> This equates to a \$3.05 billion per year average for revenue losses for the period 2007 to 2012, which is well above both Treasury and JTC estimates. In its 2006 *Annual Energy Outlook*, the Energy Information Agency (“EIA”) projects corn ethanol consumption of \$9.64 billion in 2012, far surpassing the \$7.5 billion mandate, which the EIA expects to be passed in 2010.<sup>20</sup>

An important issue is whether the credits themselves are tax exempt. Even the tiniest changes in the interpretation of the tax code can greatly affect aggregate subsidy values.<sup>21</sup> If the tax credit were includable income, the total subsidy would be the revenue loss estimated above. If the credit were not includable, however, the VEETC subsidy would increase by more than one billion “on an outlay-equivalent basis.”<sup>22</sup> Thus, the “total subsidy value” during the 2006 to 2012 period of the renewable fuel standards would be approximately \$ nine billion higher.<sup>23</sup>

In January of 2005, the Internal Revenue Service (“IRS”) issued a guidance document on implementation issues related to the VEETC.<sup>24</sup> The guidance on implementation of VEETC was silent on the tax treatment of the credits and indicated an inclination to characterize VEETC as non-includible in taxable income until clearly instructed to do otherwise.<sup>25</sup>

**CHART 1: GOVERNMENT SUPPORT FOR BIOFUELS, ENERGY POLICY ACT OF 2005.**

GOVERNMENT SUPPORT FOR BIOFUELS ENERGY POLICY ACT OF 2005		
Program	Fiscal Years	Total Amount
Sugarcane Ethanol Program	2005-2007	\$36 million
Cellulosic Biomass Ethanol and Municipal Solid Waste Loan Guarantee Program	N/A	\$1 billion
Cellulosic biomass ethanol conversion assistance	2006-2008	\$750 million
Ethanol production at Mississippi State and Oklahoma State universities	2005-2007	\$12 million
Renewable Fuels Research and Development Grants	2006-2010	\$125 million
Advanced Biofuels Technology Program	2005-2009	\$550 million
Sugarcane Ethanol Loan Guarantee Program	N/A	Up to \$50 million per project

## THE ENERGY POLICY ACT OF 2005

The Chart entitled “Government Support for Bio-Fuels” lists the amount of money earmarked for each subsidy program, as it was outlined in the Energy Policy Act of 2005 (“EPACT 2005”). What is extremely troubling to realize is that this monetary support does not displace the amount of money already being given to farmers for corn production. Rather, this money adds to the total amount that all individuals involved in ethanol production will consume from U.S. taxpayers. For example, Section 1342, Title XIII, Subtitle D of EPACT 2005:

“Provides a tax credit equal to 30 percent of the cost alternative refueling property, up to \$30,000 for business property. Qualifying alternative fuels are natural gas, propane, hydrogen, E85 [(85 percent ethanol)], or biodiesel blends of [twenty percent] [(B20)] or more. Buyers of residential refueling equipment can receive a tax credit for \$1,000. For non-tax-paying entities, the credit can be passed back to the equipment seller. The credit is effective on purchases put into service after December 31, 2005. It expires December 31, 2009.”<sup>26</sup>

Additionally, EPACT 2005 modifies the definition of “small ethanol producer” so that facilities that produce up to 60 million gallons per year (previously 30 million gallons per year) are eligible for the tax credit.<sup>27</sup>

### RENEWABLE FUELS STANDARD

Title XV of EPACT 2005 gave a huge boost to the ethanol industry by establishing a national Renewable Fuel Standard (“RFS”), which requires that gasoline sold in the United States contain a specified volume of biofuels and sets a target of 7.5 billion gallons of ethanol produced by 2012. The volume is “allocated to all refiners, marketers and importers on a pro rata basis.”<sup>28</sup> Virtually all of this mandate will be met with traditional (corn) ethanol despite sales-volume credits awarded to cellulosic ethanol.<sup>29</sup>

The RFS has been highly successful in creating incentives for ethanol and 2006 marked a new record in ethanol production in the United States with some 4.9 billion gallons being pumped out of the refineries. Because capacity expansion is proceeding at tremendous rates, with approximately 80 refinery projects underway and an expected added capacity of six billion gallons by the middle of 2009, the RFS are now considered a floor for ethanol production and not a target. Indeed, President Bush’s recent announcement of a production target for 35 billion gallons by 2017 will further build up the ethanol industry.<sup>30</sup>

The federal RFS does not preclude states from issuing more ambitious mandates of their own; however, none of the estimates above includes the price effects of state-level mandates. State renewable fuel mandates, if they are more stringent than the federal requirement, can further increase price distortions within their respective states.<sup>31</sup> If the state mandates are equivalent or less stringent than federal ones, no price distortions should be reserved.<sup>32</sup> However, state policies requiring the use of specific feedstocks or quotas on locally produced fuels may result in an incremental price effect where the percentage target does not differ from the federal mandate.<sup>33</sup>

## PRICE EFFECTS & MARKET HEDGING

As the demand for ethanol rises as a result of purchase mandates, prices of intermediate inputs often rise as well—these are goods and services consumed during the production process, such as feedstocks and construction services to build ethanol production plants.<sup>34</sup> Where they occur, price increases may exclude buyers in more price sensitive markets,<sup>35</sup> which tend to be poor and grain-importing countries.<sup>36</sup> While not all related products are expected to increase in price, co-products such as distillers' grain are expected to experience "price erosion" as the increase in supply far outpaces market demand.<sup>37</sup>

Mandates may have the effect of greatly reducing the downside risk to producers.<sup>38</sup> High gasoline prices and elimination of methyl tert-butyl ether ("MTBE") mean that demand for ethanol will likely rise regardless of the federal RFS. Investors recognize that demand is often fickle and expect non-ethanol MTBE alternatives to emerge over the long-term.<sup>39</sup> Similarly, rising crop prices and/or falling fuel prices could very well reduce the economic rationale for using ethanol.

### STATE SUPPORT AND ETHANOL PRODUCTION: THE MINNESOTA MODEL

Many states vested in ethanol production have passed their own types of ethanol subsidy laws. Indeed, some states make direct payments to ethanol producers. Minnesota has implemented a policy to award manufacturers a twenty-cent-per-gallon producer incentive to support the state's ethanol production.<sup>40</sup> Similarly, a South Dakota subsidy program provided \$3.1 million to ethanol plants in just three towns in 2001.<sup>41</sup> Nebraska also pursued a similar policy awarding 60 cents in federal and 20 cents in state subsidies per gallon of ethanol produced.<sup>42</sup> Twenty states have similarly awarded tax credits or other incentives to construct ethanol and biofuel production plants.<sup>43</sup>

Minnesota has by far been one of the most aggressive and forward thinking states in passing ethanol legislation. In 1987, the state legislature attempted to capitalize on Minnesota's largest crop, corn, by granting the Minnesota Department of Agriculture \$100,000 per year to conduct an ethanol promotion program.<sup>44</sup> The Minnesota Ethanol Commission was established to promote the production and use of ethanol in Minnesota. By 1995, the commission's purpose was furthered by a statutory goal to develop 220 million gallons of Minnesota ethanol production.<sup>45</sup> This goal was quickly surpassed. Minnesota ethanol production in 2006 was projected at 550 million gallons.<sup>46</sup>

As of June 2006, sixteen Minnesota facilities were producing ethanol.<sup>47</sup> Minnesota has 226 public pumps, nearly one-third of the 755 public pumps nationwide.<sup>48</sup> By 2010, Minnesota cars must begin running on twenty percent ethanol.<sup>49</sup> Many Min-

nesotans believe that ethanol will play a large role in the transition from oil to something else.<sup>50</sup>

In 2005, Corn Plus, a 750-member farmer co-op, achieved substantial efficiency gains in ethanol production.<sup>51</sup> The majority of ethanol facilities require one unit of energy to about 1.6 units of ethanol.<sup>52</sup> Corn Plus, using assorted efficiencies, has improved that ratio to nearly one to six through a process called a fluidized bed biomass incinerator which burns a recycled ethanol byproduct as steam cogeneration to power the facility.<sup>53</sup> Since pioneering the technology, Corn Plus reduced natural gas consumption by more than half.<sup>54</sup>

In order to protect its promising new industry, Minnesota

has taken steps to combat the influence of corporations in their state subsidized ethanol industry. In 2002, the Minnesota Corn Processors cooperative, formerly owned by 5,500 Minnesota farmers and the country's second-largest ethanol producer, voted to sell all its shares in an ethanol plant to Archer Daniels Midland Company ("ADM") and subsequently believed that the cooperative board deceived

the farmers in the sale.<sup>55</sup> Consequently, Minnesota introduced a law in 2003 to ensure that members of agricultural cooperatives would have increased access to information and have more direct influence over their cooperative policies.<sup>56</sup> A law was also introduced strengthening the state's ethanol producer payment program, restricting subsidies to those facilities owned by a majority of farmers and requiring the repayment of subsidies if the ethanol plant was sold to a corporation whose shareholders were not mostly Minnesota farmers.<sup>57</sup>

The Minnesota model of ethanol production provides an alternative scheme to how government intervention into ethanol production can yield the most profitable results. By requiring that farmers be the majority shareholders in order for ethanol production plants to receive state subsidies, the Minnesota law directs financial resources to moderately-sized, family-owned farms. Thus, this law keeps financial resources in the rural community where the corn is grown and production occurred. Because those profiting from the sale of ethanol are local farmers and not larger corporate interests (such as an out-of-state corporation like ADM), revenues are re-invested locally.

### INCREASING THE SCOPE: PENDING ETHANOL LEGISLATION AND SUBSIDIES

There are currently a number of bills circulating in both the U.S. Senate and House of Representatives that call for amendments promoting the expansion of ethanol use through subsidies to ethanol producers and distributors. Importantly, none of the bills alter the subsidy scheme that has been used in the past. As a result, all of the new bills merely add more layers of government intervention and support.

---

*Many states vested in ethanol production have passed their own types of ethanol subsidy laws.*

---

The first is the American Fuels Act of 2007.<sup>58</sup> The proposed Act offers an incentive for the retail sale of E-85 (fuel blends of 85 percent ethanol and fifteen percent gasoline) starting at \$0.35 per gallon (before 2010) and decreasing to \$0.10 per gallon in 2012. Furthermore, the bill has incorporated another financial incentive that pays for 50 percent of the equipment used to blend and process ethanol. The incentive caps at \$2,000,000, the amount that ethanol producers can garner from the government for the equipment.<sup>59</sup> The bill also includes tax credits for manufacturers of flexible fuel motor vehicles.

Another proposed law is the Dependence Reduction Through Innovation in Vehicles and Energy Act (“DRIVE Act”), introduced in the House of Representatives. The bill includes an “Ethanol Action Plan” that calls for ten percent ethanol in the transportation fuel supply by December 31, 2015.<sup>60</sup> This bill also proposes to amend the Internal Revenue Code of 1986 by increasing the ethanol tax credit from thirty percent to fifty percent of the cost of any qualified alternative fuel vehicle refueling property put into service by the taxpayer. A refueling property will qualify as an alternative fuel vehicle refueling property if at least 85 percent of the volume is ethanol (amongst other alternative fuels).

The Biofuels Security Act of 2007 calls for the increase of renewable fuels to 60 billion gallons by 2030. The bill also requires the installation of E-85 pumps at an increasing percentage of refueling stations by “major oil companies” at owned and branded stations. The Biofuels Security Act also provides incentives for the manufacture of dual fuel vehicles in order to promote the use of vehicles that utilize ethanol and other alternative fuels.

Many of the proposed subsidies being contemplated for ethanol producers are taking the form of tax incentives. These subsidies operate by making ethanol producers pay less in taxes, thus keeping more money for investment. One such amendment to the IRS is the E-85 Investment Act of 2007, which would increase the incentives for E-85 “fuel vehicle refueling property” related to ethanol from 30 percent to 75 percent.<sup>61</sup> Another bill, the Independence from Oil with Agriculture Act of 2007,

proposes permanent tax incentives for alternative energy.<sup>62</sup> The Renewable Fuels and Energy Independence Promotion Act of 2007 further anticipates permanent tax incentives for ethanol and biodiesel.<sup>63</sup> The “To Encourage Alternatively Fueled Vehicle Manufacturing up for Energy Independence Act of 2007,” also known as “TEAM up for Energy Independence Act,” plans to amend the IRS Code to impose an excise tax on automobiles sold in the United States that are not compatible with alternative fuels.<sup>64</sup> Other legislation promoting the use of ethanol is the “Congress Leads by Example through Alt-fuel Resources Act,” or the CLEAR Act, which proposes to prohibit the use of a Member’s Representational Allowance to provide any individual with a vehicle, including providing an individual with a vehicle under a long-term lease, which is not an alternative fuel vehicle.<sup>65</sup>

As their names indicate, these legislative bills attempt to capitalize on the yet unproven exogenous benefits promised by ethanol producers. Although this pending legislation will not necessarily be enacted into law, it is important to realize that Congress is contemplating an array of ethanol subsidies. If even a minority of these ethanol subsidies were passed, it would add to the growing government largess that artificially supports ethanol production.

## CONCLUSION

The policy relationships embedded in ethanol production, based on ever-growing tax incentives and subsidies, will likely be perpetuated until one of two events occurs. Ethanol subsidies and protective tariffs might lead to the establishment of an “ethanol infrastructure” that will be competitive and independent of government support. Alternatively, there is the risk that government intervention could lead to ever-greater dependence on government protection and price supports. Regardless of which scenario occurs, it is important to realize the full scope of the support that is occurring. Ultimately, the laws that mandate billions of dollars toward subsidizing ethanol production represent a policy risk. It is our hope that by understanding the laws behind ethanol production, a more informed assessment of that risk can be made.



## Endnotes: Construction of a Fool’s Paradise

<sup>1</sup> A Guide to the New Tax Law: Changes in Tax Incentives for Ethanol and Biodiesel, available at [http://www.cleanairchoice.org/outdoor/PDF/EthanolTaxBrochureJanuary%2020\\_2005.pdf](http://www.cleanairchoice.org/outdoor/PDF/EthanolTaxBrochureJanuary%2020_2005.pdf) (last visited Apr. 6, 2007).

<sup>2</sup> Environmental Working Group, Corn Subsidies in United States, <http://www.ewg.org/farm/progdetail.php?fips=00000&progcode=corn> (last visited Apr. 6, 2007).

<sup>3</sup> HOUSEIN SHAPOURI & PAUL GALLAGHER, USDA’S 2002 ETHANOL COST-OF-PRODUCTION SURVEY, available at [http://www.usda.gov/oce/reports/energy/USDA\\_2002\\_ETHANOL.pdf](http://www.usda.gov/oce/reports/energy/USDA_2002_ETHANOL.pdf) (last visited Apr. 6, 2007).

<sup>4</sup> Global Subsidies Initiative, Biofuels: At What Cost?, available at [http://www.globalsubsidies.org/article.php?id\\_article=6&var\\_mode=calcul](http://www.globalsubsidies.org/article.php?id_article=6&var_mode=calcul) (last visited Apr. 6, 2007).

<sup>5</sup> Global Subsidies Initiative, *id.*

<sup>6</sup> David Adams, *Sugar in the Tank*, FORBES.COM, Nov. 16, 2005, available at [http://www.forbes.com/2005/11/15/energy-ethanol-brazil\\_cx\\_1116energy\\_adams.html](http://www.forbes.com/2005/11/15/energy-ethanol-brazil_cx_1116energy_adams.html) (last visited Apr. 6, 2007).

<sup>7</sup> Joel Severinghaus, *Why We Import Brazilian Ethanol* (Iowa Farm Bureau 2005), available at <http://www.iowafarmbureau.com/programs/commodity/information/pdf/Trade%20Matters%20column%20050714%20Brazilian%20ethanol.pdf> (last visited Apr. 6, 2007).

<sup>8</sup> DOUG KOPLOW, BIOFUELS - AT WHAT COST?, GOVERNMENT SUPPORT FOR ETHANOL AND BIODIESEL IN THE UNITED STATES (2006), available at [http://www.globalsubsidies.org/IMG/pdf/biofuels\\_subsidies\\_us.pdf](http://www.globalsubsidies.org/IMG/pdf/biofuels_subsidies_us.pdf) (last visited Apr. 6, 2007).

<sup>9</sup> KOPLOW, *id.* at 21.

<sup>10</sup> International Trade Commission, 2006 U.S. Tariff Database, HTS 3824 and 1060, Aug. 2006.

<sup>11</sup> International Trade Commission, *id.*

<sup>12</sup> KOPLOW, *supra* note 8, at 24.

Endnotes: Construction of a Fool’s Paradise *continued on page 74*

- <sup>13</sup> KOPLOW, *supra* note 8, at 24.
- <sup>14</sup> KOPLOW, *supra* note 8, at 24.
- <sup>15</sup> KOPLOW, *supra* note 8, at 24.
- <sup>16</sup> KOPLOW, *supra* note 8, at 24.
- <sup>17</sup> KOPLOW, *supra* note 8, at 24.
- <sup>18</sup> KOPLOW, *supra* note 8, at 24.
- <sup>19</sup> KOPLOW, *supra* note 8, at 24.
- <sup>20</sup> U.S. Energy Info. Admin., *U.S. Ethanol Fuel Consumption in Three Price Cases, 1995-2030*, in ANNUAL ENERGY OUTLOOK 2006 (2005).
- <sup>21</sup> KOPLOW, *supra* note 8, at 25.
- <sup>22</sup> KOPLOW, *supra* note 8, at 25.
- <sup>23</sup> KOPLOW, *supra* note 8, at 25.
- <sup>24</sup> U.S. Internal Revenue Service, Fuel Tax Guidance; Request for Public Comments, Notice 2005-4, Jan. 10, 2005, *available at* <http://www.biodiesel.org/news/taxincentive/IRS%20Guidance%20Notice%202005-04.pdf> (last visited Apr. 6, 2007).
- <sup>25</sup> *See* KOPLOW, *supra* note 8, at 25.
- <sup>26</sup> Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 [hereinafter Energy Policy Act].
- <sup>27</sup> Energy Policy Act, *id.*
- <sup>28</sup> SHIRLEY NEFF, REVIEW OF THE ENERGY POLICY ACT OF 2005 2 (2005), *available at* <http://www.cemtp.org/PDFs/EnergyBillHighlights.pdf> (last visited Apr. 6, 2007).
- <sup>29</sup> Jason Grumet, Executive Director, National Commission on Energy Policy, Address to the U.S. Senate Committee on Commerce, Science and Transportation (Nov. 15, 2005), *available at* <http://www.energycommission.org/site/page.php?testimony=11> (last visited Apr. 7, 2007).
- <sup>30</sup> *See* President George Bush, State of the Union Address (Jan. 23, 2007), *available at* <http://www.whitehouse.gov/stateoftheunion/2007/index.html>.
- <sup>31</sup> KOPLOW, *supra* note 8, at 22.
- <sup>32</sup> KOPLOW, *supra* note 8, at 22.
- <sup>33</sup> KOPLOW, *supra* note 8, at 22.
- <sup>34</sup> KOPLOW, *supra* note 8, at 22.
- <sup>35</sup> KOPLOW, *supra* note 8, at 22.
- <sup>36</sup> KOPLOW, *supra* note 8, at 22.
- <sup>37</sup> KOPLOW, *supra* note 8, at 22.
- <sup>38</sup> KOPLOW, *supra* note 8, at 22.
- <sup>39</sup> KOPLOW, *supra* note 8, at 23 (citing David Hirschfeld, Math Pro, Inc. Telephone conversation with Doug Koplow, Aug. 14, 2006).
- <sup>40</sup> Ted Williams, *Drunk on Ethanol*, AUDUBON MAG., July-Aug. 2004, *available at* <http://magazine.audubon.org/incite/incite0408.html> (last visited Apr. 6, 2007).
- <sup>41</sup> Lawrence Reed, *Running on Empty: The Failure of Ethanol*, MIRS NEWSL. (News and Info. about Mich. Gov., MI), Aug. 10, 2001.
- <sup>42</sup> Williams, *supra* note 40.
- <sup>43</sup> DAN LOOKER, CHOICES FOR ETHANOL: A SUCCESSFUL FARMING SPECIAL REPORT (2006), *available at* <http://www.agriculture.com/ag/pdf/ChoicesForEthanol.pdf> (last visited Apr. 7, 2007).
- <sup>44</sup> Minnesota Department of Agriculture, Economic Impact of the Ethanol Industry in Minnesota, *available at* <http://www.mda.state.mn.us/ethanol/plantsreport.pdf> (last visited Apr. 6, 2007) [hereinafter Economic Impact].
- <sup>45</sup> Economic Impact, *id.*
- <sup>46</sup> Economic Impact, *id.*
- <sup>47</sup> Minn. Pollution Control Agency, Ethanol in Minnesota, *available at* <http://www.pca.state.mn.us/programs/ethanol.html> (last visited Apr. 6, 2007).
- <sup>48</sup> *The Great Corn Rush: The Future of Ethanol*, STAR TRIBUNE, Oct. 5, 2006, at 10.
- <sup>49</sup> Daniel J. Vance, *Minnesota Moonshine*, CONNECT BUS. MAG. (2005), *available at* <http://www.connectbiz.com/stories.moonshine.html> (last visited Apr. 11, 2007).
- <sup>50</sup> *Cf. The Great Corn Rush*, STAR TRIBUNE, Sept. 24, 2006, at A1 (chronicling Minnesota's increasing commitment to corn-based fuels).
- <sup>51</sup> Vance, *supra*, note 49.
- <sup>52</sup> Vance, *supra*, note 49.
- <sup>53</sup> Vance, *supra*, note 49.
- <sup>54</sup> Vance, *supra*, note 49.
- <sup>55</sup> The New Rules Project, Ethanol Production - The Minnesota Model, *available at* <http://www.newrules.org/agri/ethanol.html> (last visited Apr. 6, 2007) [hereinafter New Rules Project].
- <sup>56</sup> New Rules Project, *id.*
- <sup>57</sup> New Rules Project, *id.*
- <sup>58</sup> American Fuels Act of 2007, S. 133, 110th Cong. (2007), *available at* <http://thomas.loc.gov/cgi-bin/query/z?c110:s.133>: (last visited Apr. 11, 2007) [hereinafter American Fuels Act].

<sup>59</sup> American Fuels Act, *id.*

<sup>60</sup> Dependence Reduction through Innovation in Vehicles and Energy Act (DRIVE Act), H.R. 670, 110th Cong. § 302 (2007), *available at* <http://www.govtrack.us/congress/billtext.xpd?bill=h110-670>.

<sup>61</sup> E-85 Investment Act of 2007, H.R. 604, 110th Cong. (2007), *available at* <http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.604.IH>: (last visited Apr. 11, 2007).

<sup>62</sup> Independence from Oil with Agriculture Act of 2007, H.R. 517, 110th Cong. (2007), *available at* <http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.517>: (last visited Apr. 11, 2007).

<sup>63</sup> Renewable Fuels and Energy Independence Promotion Act of 2007, H.R. 196, 110th Cong. (2007), *available at* <http://www.govtrack.us/congress/billtext.xpd?bill=h109-5650> (last visited Apr. 15, 2007).

<sup>64</sup> To Encourage Alternatively fueled vehicle Manufacturing up for Energy Independence Act of 2007, H.R. 182, 110th Cong. (2007), *available at* [http://thomas.loc.gov/home/gpoxmlc110/h182\\_ih.xml](http://thomas.loc.gov/home/gpoxmlc110/h182_ih.xml).(last visited Apr. 7, 2007).

<sup>65</sup> Congress Leads by Example through Alt-fuel Resources Act, H.R. 277, 110th Cong. (2007), *available at* <http://thomas.loc.gov/cgi-bin/query/z?i109:I02426:i109COMPREHENSIVE.html> (last visited Apr. 11, 2007).

---