

BIOFUELS—CORN-BASED ETHANOL DRIVES THE FOOD V. FUEL DEBATE

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On April 25, 2008, Texas Governor Rick Perry asked the Administrator of the United States Environmental Protection Agency (“EPA”) for a 50 percent waiver of the renewable fuel mandates for corn-based ethanol set forth in Section 211(o) of the Clean Air Act (“CAA”), as amended by the Energy Independence and Security Act of 2007 (“EISA”).¹ On May 22, 2008, EPA solicited comments on the Governor’s request, and various parties submitted over 15,000 comments, primarily in support of the waiver.

Thus began the “food versus fuel” debate. This debate is about the unintended consequences of the Government’s decision to use grain as a fuel feedstock, diverting it from its traditional use as food. Despite the Governor’s evidence that the corn-derived ethanol industry drives up the cost of corn, fertilizer, diesel and gasoline and thus directly harms the livestock industry (e.g., cattle, dairy, hogs, and poultry), the EPA Administrator, in consultation with the Secretaries of Energy and Agriculture, announced his denial of the waiver request in early August 2008.²

EPA’s denial, however, does not end the debate. Renewable fuels is at the center of the national debate on the nation’s energy policy. The existing biofuels legislation that has drawn

fire during this debate focuses on the following: (1) government-imposed mandates requiring the blending of ethanol with gasoline; (2) tax credits provided to gasoline blenders for each gallon blended; and (3) tariffs on ethanol imports. Not surprisingly, politicians in the corn growing and ethanol producing states who vehemently opposed the Governor’s waiver request have worked hard to obtain and preserve the mandates, tax credit and tariff. “National security” are the buzz words that are used to support their pro-ethanol agenda. Comments such as “we must end our addiction to foreign oil and develop independent sources of energy” are typical. In a sense, their strategy is brilliant. Few, if any, politicians will debate this argument. While the need for renewable fuels and alternative sources of energy will remain fixtures for the foreseeable future, the real question is how do we best find and develop these new sources of energy without exacting major sacrifices on the economy and the citizens?

In 2005, corn-based ethanol was touted as the centerpiece of the renewable fuels alternative to foreign oil and would pave the way for second-generation biofuels (sugar bagasse, biodiesel, etc.). It was also touted as a cleaner burning fuel (as compared to

gasoline), which would have positive effects on air quality, particularly in areas that have not attained the National Ambient Air Quality Standards (such as Houston and Galveston).

However, what political leaders did not anticipate in 2005 when they passed the Energy Policy Act³ was the downstream effects – financial and environmental – that corn-based ethanol would cause once the program was implemented. As discussed herein, this new government program had a significant negative impact on important segments of the U.S. economy, such as the livestock industry and, ultimately, each of us. Furthermore, rather than reduce American reliance on foreign oil, the program arguably has contributed to an increase in U.S. dollars sent overseas for foreign oil due to complex interactions within the oil markets.⁴ In December 2007, and perhaps more notably, before the first presidential caucus on January 3, 2008 in corn-rich Iowa, Congress voted to double the ethanol mandates through the EISA.⁵ The potential downstream economic consequences on doubling the mandate were not evaluated before the votes were cast. Shortly thereafter, the EISA was signed into law.

History of Renewable Fuel Standard

Congress first introduced renewable fuel mandates into the CAA in August 2005, through the Energy Policy Act of 2005. Those mandates called for the introduction of certain volumes of renewable fuel—effectively corn-derived ethanol—into

retail gasoline, starting at 4 billion gallons in 2006 and growing to 7.5 billion gallons in 2012. At the time, the price of a bushel of field corn approached \$2.00; a gallon of gasoline was \$2.25; and a barrel of crude oil was \$50.00.⁶

Over the next two years, EPA implemented the 2005 mandates, promulgated a complex cap-and-trade program in May 2007,⁷ and created a Renewable Fuel Standard (or “RFS”), which is the percentage of ethanol that must comprise each gallon of gasoline sold at the pump, in November 2007.⁸ In the middle of 2007, corn prices were around \$4.00 per bushel – roughly twice their 2005 level.⁹ Retail gasoline had gone up roughly 50 percent, and crude oil only about 20 percent.¹⁰

In December 2007, Congress passed the EISA, which called for a much higher and faster injection of renewable fuel into retail gasoline. EISA calls roughly for the injection of 9 billion gallons of corn ethanol for 2008, 11 billion for 2009, 13 billion for 2010, 14 billion for 2011, and 15 billion for 2012.¹¹ In response to EISA, EPA revised the RFS for 2008, increasing it by two-thirds, in line with the volume mandate.¹²

Concomitantly, commodity prices skyrocketed. In June 2008, corn prices were approaching \$8.00 per bushel (a doubling since mid-2007 and a quadrupling since mid-2006),¹³ and crude oil prices \$140 per barrel (a trebling since mid-2007). Similar increases occurred in both diesel and gasoline prices, with a significant upward spike months since the passage of the EISA.

The diversion of croplands to corn destined for ethanol production and the planting of additional acreage has been significant and continues to increase.¹⁴ Moreover, poor growing seasons attributable to wet weather and flooding or droughts create significant swings in the market. According to experts, including Keith Collins, the former chief economist for the USDA, the nation is at record lows in terms of its national corn stock, and the carry-over from 2008 to 2009 will likely be the lowest in recent times.

The massive redirection of corn to ethanol, and the corresponding increase in acres planted, ironically puts the environmentalists and the livestock industry, among others, on the same side arguing against the mandates. The environmentalists argue that the explosion in corn plantings has created a significant water quality problem in the form of stormwater containing herbicides and pesticides contaminating groundwater supplies and the Mississippi River (and contributing to the Dead Zone in the Gulf of Mexico). The livestock industry points to the dramatic rise in the price of corn (used as feed) and fertilizer (used for grazing fields) since 2005 as evidence of significant harm. Additionally, the State of Texas argued that the renewable fuel mandate is a significant contributor to water quality problems (e.g., high levels of nitrogen in streams due to runoff from increased fertilizer use) and air quality problems (e.g., an increase in air emissions of volatile organic compounds and nitrogen oxides).¹⁵

The Clean Air Act's Safety Valve

In creating the RFS, Congress included a safety-valve provision in the Clean Air Act, empowering EPA to waive the mandates in whole or in part. Section 211(o)(7) provides that EPA, in response to a petition by a state, “may” waive the volumetric mandates in Section 211(o)(2)(B) in whole or in part by reducing them, if the Administrator determines either that the mandates “would severely harm the economy” of the state, the region, or the Nation, or that “there is an inadequate domestic supply” of renewable fuel.¹⁶ A waiver terminates after one year, but is renewable.¹⁷

Unfortunately, Congress left very few clues or guidance on the meaning of the waiver in Section 211(o)(7) of the CAA. EPA also expressly chose not to promulgate a rule implementing the statutory waiver provision.¹⁸ Now, with its denial of the Governor’s waiver request, EPA provides its own interpretations on what Congress must have meant when it wrote the waiver provision.¹⁹ In doing so, EPA has narrowly interpreted the waiver provision to require “a determination based on the expected impact of the RFS program itself, a generally high degree of confidence that implementation of the RFS program would severely harm the economy of a State, region, or the United States, and a high threshold for the nature and degree of harm by requiring a determination of severe harm.”²⁰

Rather than looking at the severity of the harm caused by the consequences of the RFS program (such as its ripple effect on the increase in corn prices carried over to the

livestock industry, among others), EPA took the easy road out and determined that it need look only at whether the implementation of the RFS program is causing severe harm. This means that EPA limited its review of the waiver request on whether implementation of the program, not the mandates themselves, is causing severe harm. The State of Texas argued that Congress could not have intended to predicate a waiver on such a link because such a situation is never found in the real world.²¹ The State continued by stating that “Congress must have meant to pivot a waiver on whether the mandates would contribute significantly to causing severe harm, as part of a mix of forces.”²² Taking a contrary, more narrow position (as EPA has done here) effectively renders the safety valve provision a nullity.

The Economic Health of the Livestock Industry is a Leading Indicator

The food v. fuel debate centers on whether the production of corn-based ethanol and the diversion of corn to fuel is causing the price of food to soar to historic levels. A corollary, but equally important question is whether the mandated blending of ethanol with gasoline is suppressing or increasing the price of gasoline at the pump. Ethanol proponents argue that there is no evidence linking high corn prices with high food prices.²³ They focus their rhetoric on the cost of grain-based foods available in grocery stores (e.g., cereal). They further argue using economic studies that the cost of producing a gallon of ethanol is cheaper than a gallon of

gasoline and, therefore, the price of a blended gallon of gasoline at the pump is less expensive.

The counter argument advanced by the State of Texas, the livestock industry, and many others is that corn-based ethanol has severely affected the economics of the livestock ranchers and producers due to the high costs of corn for feed and fertilizer for grazing.²⁴ They further argue that there is a direct relationship between the price of corn and the RFS mandate and that, contrary to the argument of the ethanol proponents, the price of diesel, crude, and gasoline has increased due to the mandates.

One thing is for certain, however: the impact of high commodity and fuel prices are complex, and their effect will take several years to ripple through the economy. For Texas and many other states, the economic health of the livestock industry (a leading indicator of the overall economic harm caused by the mandates) is suffering greatly.²⁵

In pushing for the waiver, the State of Texas argued that even though the creation of the original ethanol mandate in 2005 had a material adverse effect on the livestock industry, the doubling of the mandate in late 2007 has crippled the industry, the effects of which will be passed on to all of us in the years to come. For example, since the passage of the EISA, the cost for hamburger meat at the producer level has increased on an annualized rate of 46 percent (or 23 percent from January to June 2008).²⁶ Additionally, due to the high costs for feed and fertilizer placed on the

cattle rancher, more cows than ever before are being sent to slaughter.²⁷ The result is a depletion or liquidation of the national herd to historically low levels. If this trend continues, some predict that the U.S. will experience a meat production shortage matching levels not seen since 1973 when President Nixon imposed a price freeze on cattle.²⁸

Furthermore, the State of Texas contends that the livestock industry also is reeling from the economic squeeze imposed by the ever-increasing production costs that are largely affected by the price of fertilizer (essential for maintaining adequate pasture land for grazing).²⁹ The spike in fertilizer cost is largely attributable to increased demand by the corn crop growers who have increased acreages to sell to the

ethanol producers. Thus, the “odd person out” is the cattle rancher who is unable to compete and gets squeezed on both sides – increased cost of fertilizer on the cost side and lower revenue on the calf side. By most accounts, when the mandates were first put into effect in 2005, the livestock industry suffered an economic setback but had managed to cope and maintain some level of profitability. Then came the unexpected doubling of the mandate in 2007 which, despite Congress’ best intentions, has all but crippled the industry.

Conclusion

The corn-based ethanol industry and its supporters are a formidable foe when it comes to having an open and frank dialogue on whether the legislation that created the industry

had unintended consequences and, now, on whether it should be changed. Certainly, no one debates the need to move away from our reliance on foreign oil and renewable energy is clearly one of our best options. However, the bandwagon of renewable energy got off track when it came to corn-based ethanol. By encouraging its growth through mandates, tax credits, and tariffs, Congress has unintentionally exacerbated the harm that we are now feeling at the dinner table by taking our tax dollars to pay for it. Now, with EPA’s reluctance to pull the safety valve lever in the face of what many consider overwhelming evidence, Congress needs to take action to reverse itself on ethanol mandates and stop the pork barrel from rolling us over.

Endnotes

1. Pub.L. 110-140, 121 Stat. 1492 (Dec. 19, 2007).
2. See 72 Fed. Reg. 47168 (August 13, 2008) (Notice of Decision Regarding the State of Texas Request for a Waiver of a Portion of the Renewable Fuel Standard or “Decision Document”).
3. Pub.L. 109-58, 119 Stat. 594.
4. Verleger and Chodorow, *The Economic Implications of the Texas Waiver on Petroleum Markets and the Broader Economy*, June 2008 (attached as exhibit to the Governor’s June 23, 2008 comment).
5. See *infra*. Note 3.
6. See, e.g., Congressional Research Service, *High Agricultural Commodity Prices: What Are the Issues?*, Figures 1, 4 & 14 (May 6, 2008) (RL34474) (hereinafter, “CRS Report on High Agricultural Commodity Prices”).
7. See 72 Fed. Reg. 23900 (May 1, 2008) (the “Renewable Fuel Standard Program,” commonly known as “RFS-1”).
8. See 72 Fed. Reg. 66171 (Nov. 27, 2008).
9. See, e.g., FarmEcon LLC, *Comments for Texas Ag Forum*, sixteenth slide (June 9, 2008) (Thomas E. Elam) (hereinafter, “Elam Presentation to Texas Ag Forum”).
10. See, e.g., CRS Report on High Agricultural Commodity Prices, Figure 14.
11. See EISA § 202(a)(2), 121 Stat. 1522 (eff. 1-1-09, CAA § 211(o)(2)(B)).
12. See 73 Fed. Reg. 8665 (Feb. 22, 2008).
13. While the price of corn as of October 15, 2008 has declined in lock step with other commodities affected by the current financial crisis, its relative price is still high. The decline in corn futures and its affect on food and fuel prices remains to be seen. Proponents for ethanol argue that there is a direct correlation between corn and oil while the same cannot be said about the correlation between corn and food prices (e.g., cereal). Renewable Fuels Association, *Will the Plunge in Grain Prices mean Lower Food Prices at the Supermarket?*, October 15, 2008.
14. According to the USDA’s October 10 Crop Production report, farmers are expected to produce the second largest corn crop ever (12.2 billion bushels with an average yield of 154 bushels). See USDA National Agricultural Statistics Service, *Crop Production Report*, October 10, 2008.
15. See State of Texas, *Supplemental Comments on Whether EPA Should Waive the RFS-II for 2008-09 by 50 Percent*, pp 22-24 (August 6, 2008) (“Texas’ Supplemental Comment”).
16. See 42 U.S.C. § 7545(o)(7)(A) (2008 ed.); EISA §§ 210(a)(2), (c), 121 Stat. 1532. While EISA’s amendments to Section 211(o)(7) do not take effect until January 1, 2009, they are not material to the present discussion.
17. See 42 U.S.C. § 7545(o)(7)(C).
18. See 72 Fed. Reg. 23912 col. 2.
19. See 72 Fed. Reg. 47168 (August 13, 2008).
20. *Id.* at p 47169 (emphasis added).
21. See State of Texas, *Comments on Whether EPA Should Waive the RFS-II for 2008-09 by 50 Percent*, p. 14 (June 23, 2008) (“Texas’ Comment”).
22. *Id.*,
23. See e.g., Renewable Fuels Association, *Comments of the Renewable Fuels Association on the Request from the State of Texas for a Waiver of a Portion of the Renewable Fuel Standard* (June 23, 2008).
24. See *infra.*, Notes 15 and 21.
25. Statement of Dr. Joe L. Outlaw of Agricultural and Food Policy Center (“AFPC”) at Texas A&M University Before the Senate Energy Committee, U.S. Congress, on the relationship between US renewable fuels policy and food prices, at fourth page (June 12, 2008) (Outlaw states that “[t]he evidence suggests that over the short-term (less than two years), livestock producers have been unable to pass higher feed costs to consumers, due to their industry structure and competitive pressures. There is no doubt, however, that these industries are experiencing dramatic financial losses due to increases in their costs of production. If current market conditions persist, meat supplies will eventually decline due to producer attrition and capacity reduction, which will lead to higher retail prices for meats.”) (emphasis added).
26. See Texas’ Supplemental Comment, pp.6-7 and Exhibit 4.
27. *Id.*
28. *Id.*
29. *Id.*