



Consumer Federation of America

OVER A BARREL

WHY AREN'T OIL COMPANIES USING ETHANOL TO LOWER GASOLINE PRICES?

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Across the country, consumers are facing the highest gasoline prices in memory, while oil companies are reporting record profits. The profits at ExxonMobil alone exceeded \$25 billion in 2004 with every expectation that 2005 profits will be even greater. *The Wall Street Journal* recently reported, "Exxon Mobil Corp. is gushing money. Amid soaring crude-oil prices, it recently reported a fourth-quarter profit that amounted to the fattest quarterly take for a publicly traded U.S. company ever: \$8.4 billion. That translated into \$3.8 million an hour."¹ As oil companies squeeze every penny they can from consumers' pocketbooks, they continue to import high priced crude oil from the Middle East and elsewhere, engage in mergers that further reduce already constrained competition, and avoid, wherever possible, blending their gasoline with alternative fuels like ethanol.

In the past, some consumers have expressed skepticism of economic benefits derived from blending ethanol into gasoline. But in the face of rising gasoline prices that skepticism is beginning to wane. For example, Senator Chuck Schumer (D-NY), once a critic of ethanol, now points to the benefits of building local production capacity in New York to create jobs and markets for farmers and lower gasoline prices for consumers.²

Contributing to the changing attitude toward ethanol is the fact that prices for ethanol have declined while pump prices for gasoline now exceed \$2.20 per gallon in many parts of the country. As *Business Week* recently reported, "...since the start of the year, the wholesale price of ethanol has fallen more than 20%, to around \$1.20 a gallon, while black gold is soaring to record highs."³ Given the sharp decline in ethanol prices, one would expect major oil companies to increase their purchases of ethanol beyond what is required by the Clean Air Act. However, contrary to rational economic expectations, oil companies are not expanding their purchases of lower-priced ethanol, but are continuing to purchase expensive crude oil

and raising gasoline prices to consumers. Frustrated, some ethanol producers are beginning to export their product.⁴ This creates a situation of lower-priced ethanol leaving the country while higher-priced oil enters it — hardly an indication of rational economic behavior.

Changing consumer perceptions about the benefits of ethanol are reinforced by several recent developments:

- **Rising gasoline prices amidst declining ethanol prices.**

At a time when the price of gasoline all over the country is increasing, the price of ethanol has been declining in part because of increased production, but in part because oil companies are refusing to purchase the available supplies to blend with their gasoline.

- **Major oil companies cost consumers as much as 8¢ a gallon by boycotting lower-cost ethanol.**

With today's price differential between the wholesale price of ethanol and the average wholesale price of gasoline, consumers who purchase gasoline blended with 10% ethanol could be saving as much as 8 cents a gallon if oil companies purchased ethanol instead of importing more expensive foreign oil.

- **Terminal and other infrastructure exists to handle additional ethanol supplies in markets across the country.**

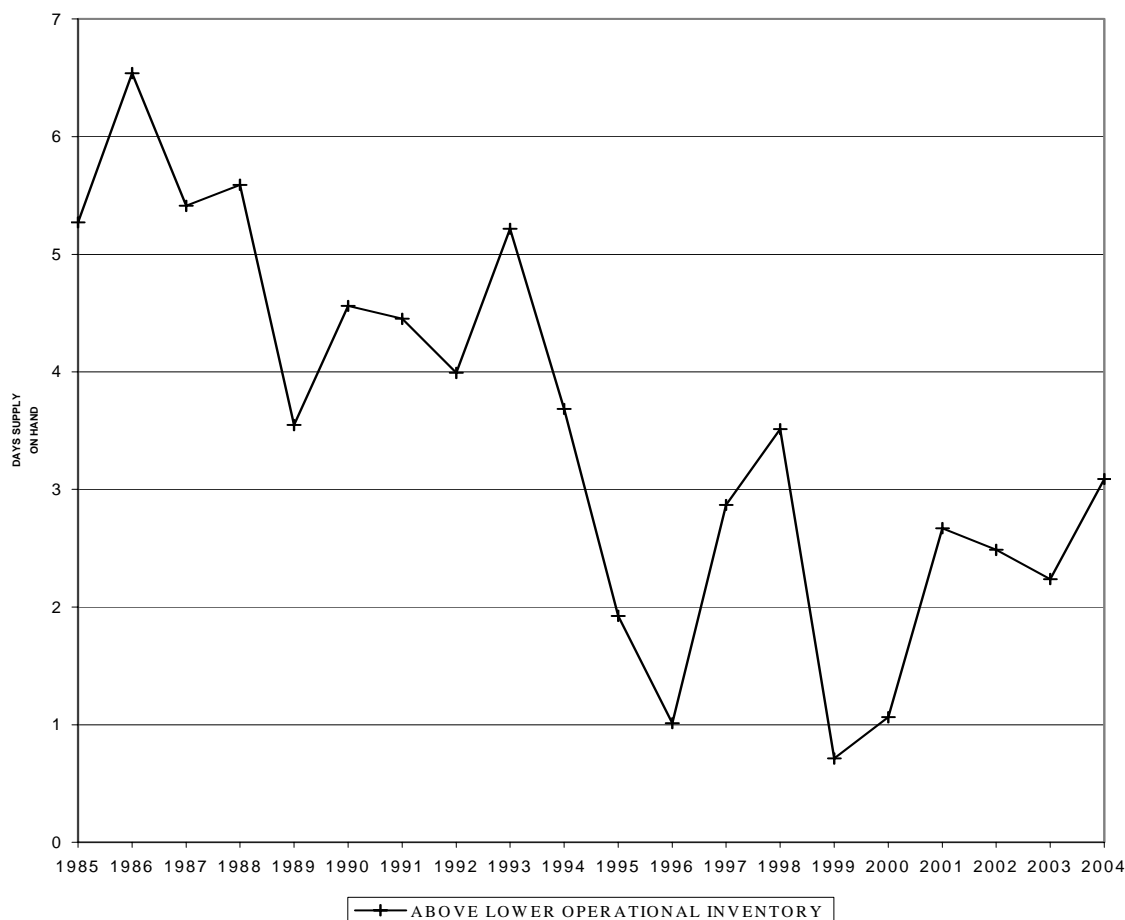
Companies have built capacity – terminals, storage tanks, blending equipment – to use ethanol. But even though this capacity exists, oil companies have chosen to purchase more expensive petroleum instead of ethanol.

Gasoline Price Increases, Consumer Costs and Oil Company Profits

According to the most recent data published by the Energy Information Administration, the average US price for a gallon of regular unleaded gasoline was \$2.24 as of April 25, 2005.⁵ This price is 42 cents a gallon higher than the year before, a jump of 23 percent. Since December 2004, the average price has climbed 40 cents a gallon. While some of this price increase is due to the higher cost of crude oil, some of it is directly related to continuing efforts by the major oil companies to keep their inventories as tight as possible.

Decisions about refinery capacity and stockpiling of product are business decisions.⁶ Figure 1 below demonstrates that oil refiners have limited gasoline inventories to less than 3 or fewer days of supply above the minimum operating reserves necessary to keep the system functioning since the consolidation of the industry. There is simply no slack in the system and this keeps markets tight. The closure of fifty refineries and the failure to build new ones in the past decade and a half reinforce this strategy.

Figure 1: Stocks Above Lower Operational Inventory



Source: Energy Information Administration

Oil company refinery and inventory management has not only kept inventories low and prices high, but also resulted in record high monopoly profits (see Table 1). The 13 oil companies that account for over 84 percent of US refinery runs in 2004 increased their income on US refining and marketing operations in 2004 by more than 130% over 2003 – from \$6.6 billion to \$15.3 billion. In other words, as oil companies charged consumers an average of nearly 29 cents a gallon more in 2004 than in 2003 for their gasoline, major oil companies were reaping windfall profits. For the average consumer, an increase of 29 cents a gallon means an extra \$160 per year in the cost of driving the average car.

When assessing oil company profitability in the refining and marketing segment, it is important to recognize that “Domestic refining and marketing has become a more prominent contributor to net income over the past 4 years but has also demonstrated how volatile this segment of the industry can be. In 2000, 2001, and 2003, domestic refining and marketing had 3 of the 4 best years in terms of net income in the history of the FRS survey...”⁷ And 2004 was significantly better than 2001, the industry’s previous best year.

Table 1: Income From Downstream Operations

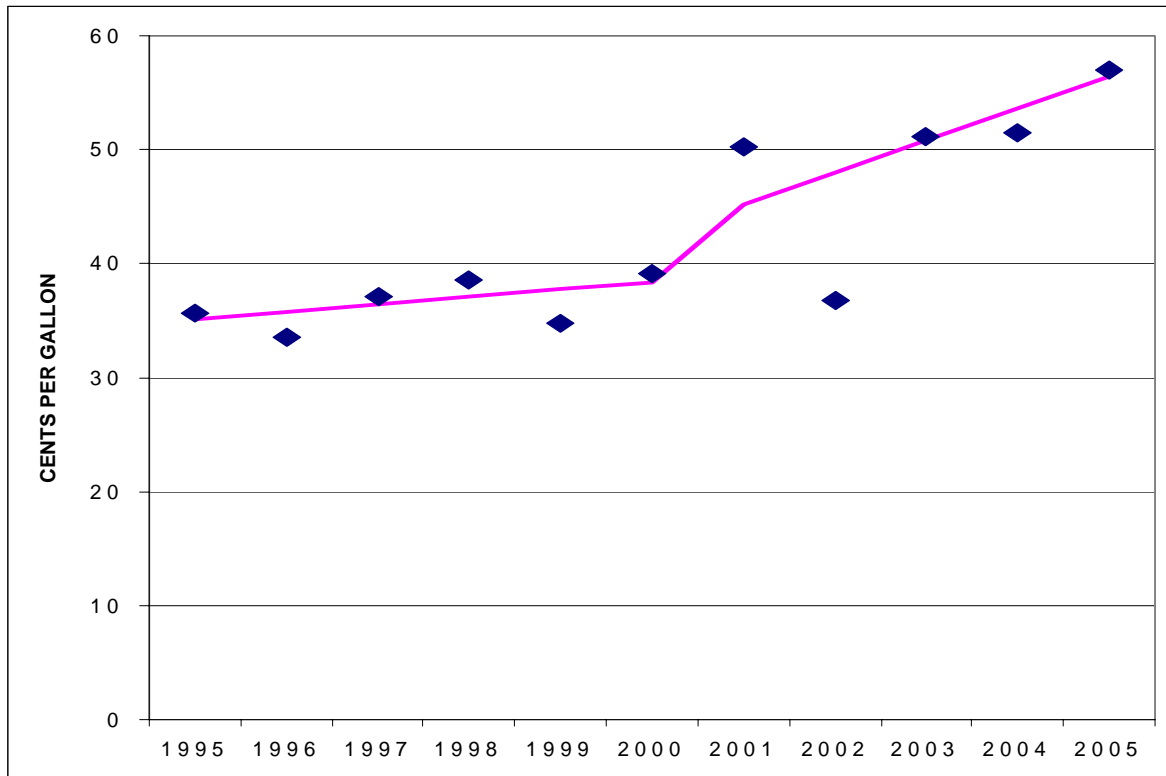
Company	Refining/Marketing Income (millions)	
	2003	2004
ExxonMobil	\$1,348.0	\$2,186.0
Shell	\$379.0	\$1,686.0
ChevronTexaco	\$482.0	\$1,261.0
BP	\$748.0	\$2,478.0
ConocoPhillips	\$1,272.0	\$2,743.0
Valero	\$621.5	\$1,803.8
Marathon	\$819.0	\$1,406.0
Amerada Hess	\$643.0	\$977.0
Murphy	-\$21.2	\$53.4
CITGO	\$439.0	\$625.0
Sunoco	\$352.0	\$609.0
Premcor	\$116.6	\$477.9
Tesoro	\$76.1	\$327.9
Total	\$6,730	\$15,219

Source: Company Annual Reports.

The first quarter of 2005, with dramatically rising crude oil prices presents a stunning example of how domestic oil companies exercise market power over price to abuse consumers (see Figure 2). If rising raw material (crude oil) costs were the problem then we would expect the domestic spread to decline as competition and consumer resistance (the elasticity of demand) squeezed the margin between the cost of inputs and the retail price. The opposite has happened because the industry is not competitive. Only in 2002, when demand was very weak due to the recession following September 11, did margins return to their historic levels. The winter of 2002 also taught the industry a lesson, that competition on price lowers profits.

The rising domestic spread numbers translate immediately into rising profits in the domestic refining and marketing industry (see Table 2). For the ten largest companies that refine crude oil in the U.S. profits increased by almost 60 percent in the first quarter of 2005 compared to the first quarter of 2004. This was a larger increase in profits than domestic exploration and production (16 percent) and total oil company operations (39 percent). There is no doubt that crude oil price increases contributed to the increase in the price at the pump, but so too did increasing margins and profits for domestic refining and marketing.

**Figure 2: First Quarter Domestic Spread On Gasoline
(Pump Price Minus Taxes and Crude)**



Source: Energy Information Administration.

Table 2: Oil Industry Profits

Company	Refining /Marketing U.S. Only		Global	Total
	1q 2004	1q2005	1q2004	1q2005
EXXONMOBIL	\$392	\$645	\$5,440	\$7,860
SHELL	\$215	\$405	\$4,702	\$6,673
BP	\$827	\$1,429	\$4,912	\$6,602
CONOCOPHILLIPS	\$403	\$570	\$1,616	\$2,912
CHEVRONTEXACO	\$276	\$58	\$2,562	\$2,677
VALERO	\$273	\$622	\$248	\$534
MARATHON	\$49	\$210	\$258	\$324
AMERADA HESS	\$137	\$102	\$281	\$219
MURPHY	-\$11	-\$8	\$98	\$113
PREM COR	\$53	\$129	\$53	\$129
TOTAL	\$2,614	\$4,162	\$20,170	\$28,043

Source: Company 1q2005 Reports

In contrast to gasoline prices, which have risen as a result of rising input prices and the exercise of market power by domestic refiners, ethanol prices have not risen because the cost of the raw materials has not risen and the producers of ethanol do not have market power.

So why don't oil companies use more ethanol to keep price increases down? The answer is simple. The market is not competitive enough to force them to worry about price increases. They also do not own the ethanol. They prefer to process more crude oil and make more money by keeping the price up.

Gasoline Price Decreases Consumers Aren't Getting

While the oil marketplace has become much less competitive over the past ten years because of huge mergers between the largest companies, one would still expect that the availability of lower cost gasoline components would attract buyers.

In sharp contrast to the oil industry, the ethanol industry has become more competitive. According to a recent study "ethanol production was the only agricultural sector in which concentration has steadily decreased. A decade ago, the top four companies owned 73 percent of the ethanol market. Today the top four companies control 41 percent of the ethanol produced."⁸

But, when it comes to ethanol, oil companies have failed to respond. Over the last several months, ethanol prices have fallen by between 40 cents and 50 cents a gallon in different parts of the country, yet there is little, if any, evidence that refiners have taken advantage of the opportunity to purchase any supplies other than those required to meet the requirements of the Clean Air Act. According to Bernie Punt, general manager of an ethanol plant in Sioux Center, Iowa, "Unless most of these oil companies are told by the government they have to use it, they won't."⁹

Table 3 below shows price changes for spot or wholesale prices for ethanol and regular reformulated gasoline sold in three major US markets between November 2004 and March 2005. In all three markets, the spot price of ethanol fell between 41 cents and 50 cents a gallon while the spot price of gasoline rose between 13 cents and 30 cents a gallon.

Ethanol production has been climbing steadily as new producers continue to add capacity that is expected to reach 4 billion gallons this year (see Figure 3). On a monthly basis, production of ethanol reached an all-time high of 245,000 barrels per day in February.¹⁰

Table 3: Ethanol and Gasoline Prices

Spot Ethanol Prices (per gallon)

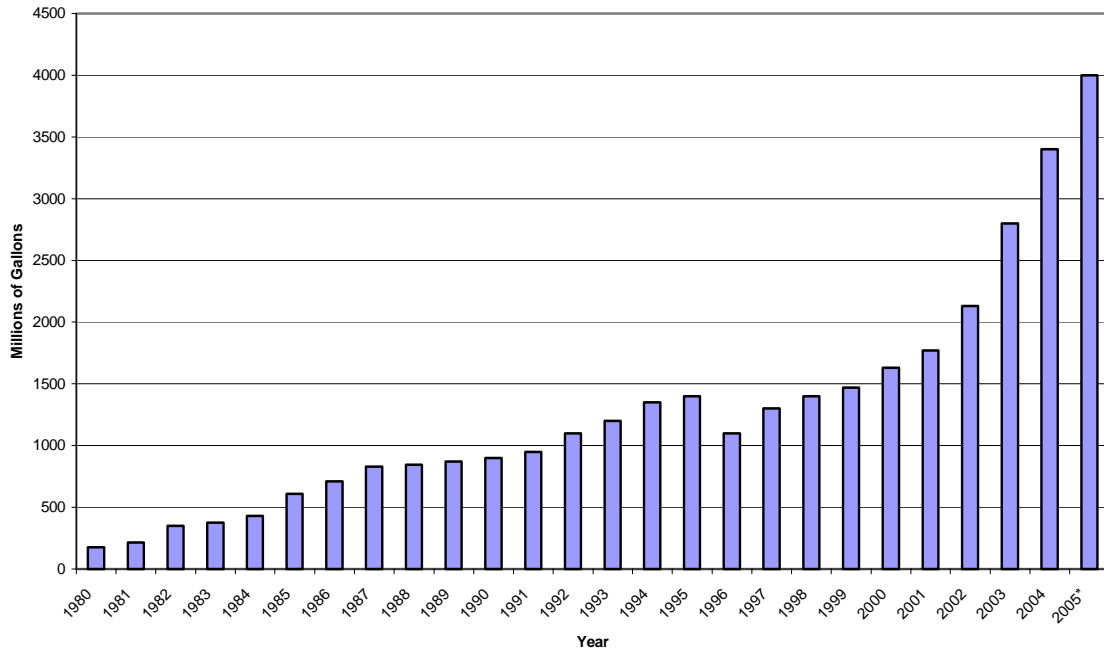
Market	Nov	Mar	Change
LA	\$1.785	\$1.373	-\$0.412
CHIC	\$1.821	\$1.394	-\$0.427
NY	\$1.771	\$1.275	-\$0.496

Spot Regular RFG Gasoline Prices (per gallon)

LA	\$1.386	\$1.682	+\$0.296
CHIC	\$1.256	\$1.492	+\$0.236
NY	\$1.265	\$1.398	+\$0.133

Source: Platt's Oilgram Price Report.

Figure 3: Annual U.S. Ethanol Production



*Projected

Source: Renewable Fuels Association.

Ethanol is blended with gasoline to help reduce air pollution. In California, New York and Connecticut – states which have phased out the use of MTBE – ethanol must be blended with gasoline to meet Clean Air Act requirements for oxygenated fuel. In New York and Connecticut, 10% ethanol is blended with 90% gasoline while in California, 5.7% ethanol is blended with 94.3% gasoline.

Gasoline Price Reductions to Consumers with Increased Use of Ethanol

The best example of how consumers could realize lower gasoline prices is using sales of petroleum products and ethanol in New York harbor (see Table 4).¹¹ Gasoline and ethanol shipped into New York harbor serve markets in New Jersey where refiners still use MTBE and New York and Connecticut where refiners blend ethanol. Assuming that refiners and gasoline marketers in New York harbor took advantage of lower-priced ethanol during March, they could have lowered consumer gasoline prices by 5 cents a gallon in New Jersey compared to RFG using MTBE and by 7 cents a gallon compared to conventional gasoline used outside of the metropolitan areas required use of RFG.

Table 4: Prices for Reformulated Gasoline

New York Spot Prices (\$ per gallon)

March 2005	NY RFG-MTBE	NY RFG-ETH	Diff.
	\$1.40	\$1.35	\$0.05
	NYRUL	NY RFG-ETH	
	\$1.44	\$1.37	\$0.07

Source: See Note 11.

Another example where consumers could save money at the pump is California, the nation’s highest price gasoline market (with the exception of Hawaii). If, instead of just blending 5.7% ethanol, California refiners chose to blend 10% ethanol as they do in New York, Chicago and Connecticut, California motorists could save as much as 8 cents a gallon.

These potential cost savings to consumers represent only the arithmetic result of blending more lower cost ethanol with higher cost gasoline. The increase in available supplies could have an additional effect in lowering prices and reducing volatility.

Oil companies have the capacity to use more ethanol to lower consumer gasoline prices.

In numerous markets across the country, oil companies have put in place all the necessary equipment to blend ethanol. In Atlanta, for example, where oil companies had prepared to supply ethanol blends starting January 1, 2005, Chevron with a market share of 14% stated it “invested over \$2,000,000” to its Atlanta area gasoline supply terminal.¹² In

northern New Jersey, oil companies that supply metropolitan New York (including southern Connecticut) have had capacity to blend ethanol in place since January 1, 2004. Instead of supplying more expensive reformulated gasoline (RFG) with MTBE, these companies could choose to blend with less expensive ethanol to supply outlets in northern New Jersey. And in most Midwestern states – Iowa, Nebraska, Illinois, Missouri, and others — where ethanol is blended in mid-grade (89 octane) gasoline, there is nothing to prevent oil companies from blending ethanol in regular (87) and premium (91) grades of gasoline.

Conclusion

The consumer implications of the refusal to use more ethanol are clear. While gasoline refiners are using as much ethanol as required, the same refiners are not buying lower-cost ethanol in other gasoline markets. Thus, consumers in many parts of the country where ethanol can be delivered to existing storage and terminal facilities are not receiving lower cost supplies and are paying as much as 8 cents a gallon more at the pump than they would if oil refiners purchased ethanol to blend.

The broader public policy implications should not be overlooked because the added abuse of consumers frustrates the nation's ability to address the fundamental energy problem. The failure of the oil industry to increase the use of ethanol undercuts the claim that they need to drill in Alaska to solve the problem for two reasons. First, we could increase the production of ethanol much faster and provide a lot more output to displace imported oil than new finds in Alaska could ever produce. Second, the same companies that dominate the gasoline business would control the flow of oil from Alaska, so there is not guarantee that it would have a substantial impact on prices, even if the amount of oil found was significant.

When the American people are asked about the current gasoline situation, they blame oil companies and the Bush administration. This analysis suggests that they are correct in that assessment. The Bush Administration defends the oil companies, whose increased profits and strategic business actions have played a big part in the recent price increases, keeps asking the American people to make hard sacrifices to deal with the problem in the long term, while the oil companies get off easy and policy makers fail to implement the simple and obvious policies that would help consumers in the short and long term.

The *New York Times* took the administration to task because President Bush

completely ignored the surest way to reduce demand and thus oil dependency, which is to improve the fuel efficiency of America's cars and trucks. Indeed, everything Mr. Bush said seemed designed to divert attention from this simple and technologically feasible idea... Then, too, he could not resist the deceptions that make debating energy in Washington such a frustrating matter. These include... drilling in the Arctic Natural Wildlife Refuge.¹³

Pointing out that the “House bill is dreadful,” the *Times* concluded that this “leaves the job of fashioning a coherent strategy in the Senate's hands.” Among the ideas with merit

that the *Times* noted for addressing the gasoline problem, in addition to “stricter fuel economy standards,” is creating “biofuels” from agricultural waste. The irony is that we already have a “biofuels” industry that is not being fully utilized.

Until policymakers start advocating sensible and simple policies in the short and long term, American consumers are right to resist the bad policies that are being foisted on them.

ENDNOTES

(Endnotes)

¹ “Mighty Profit Maker,” *The Wall Street Journal*, April 8, 2005.

² Remarks by Senator Charles Schumer, Metropolitan Development Association Annual Meeting, Syracuse, New York, March 23, 2005.

³ “One Fuel That’s Still a Bargain,” *Business Week*, April 18, 2005.

⁴ “U.S. Producer Inks Ethanol Export Deal,” *Oil Price Information Service*, March 25, 2005.

⁵ “Gasoline and Diesel Fuel Update,” Energy Information Administration, <http://tonto.eia.doe.gov/oog/info/gdu/gasdiesel.asp> , April 25, 2005.

⁶ Cooper, Mark, “Record Prices, Record Oil Company Profits: The Failure of Antitrust Enforcement to Protect American Consumers,” *Antitrust Section, American Bar Association*, March 30, 2005.

⁷ *Performance Profiles of Major Energy Producers 2003*, Energy Information Administration, March 2005.

⁸ Hendrickson, Mary and William Heffernan, National Farmers Union, February 2005.

⁹ “No windfall for Midwest’s corn-based fuel,” *Chicago Tribune*, 1/17/2005.

¹⁰ Energy Information Administration, *Petroleum Supply Monthly*, Appendix D, April 2005.

¹¹ To obtain the price of gasoline blended with 10 percent ethanol in the New York market, we multiplied the New York harbor spot price of RBOB as reported by Platt’s times .90, added that to the New York harbor spot price of ethanol multiplied by .10 and subtracted the 5.1 cents a gallon ethanol tax credit. We then compared this price to the New York harbor price of gasoline containing the additive MTBE. We then subtracted the ethanol blend from the MTBE blend to calculate the difference in price.

To arrive at a price for creating a 10 percent ethanol blend in California, we multiplied the Los Angeles spot price for unleaded gasoline times .9 and added it to Los Angeles spot price times .1 and subtracted 5.1 cents a gallon ethanol tax credit. We subtracted the unleaded price from the 10% ethanol blend to calculate the price difference.

¹² “Chevron made significant investments with regard to construction projects at Chevron’s Atlanta area gasoline supply terminal to meet the January 2005 RFG deadline for Atlanta, the issue in this case. Specifically, at Chevron’s Doraville, Georgia terminal (4026 Winters Chapel Road), Chevron invested over \$2,000,000 to modify an existing 750,000 gallon capacity covered tank to contain the ethanol necessary for blending compliant RFG, to install the piping necessary to move ethanol from this tank to the truck loading rack where the ethanol will be blended into the reformulated gasoline blendstock prior to delivery to the service stations, and to install the metering equipment required to ensure precise blending of the ethanol with the gasoline blendstock. Through these investments, Chevron was ready and able to begin receiving ethanol on November 1, 2004 and to begin blending RFG on December 1, 2004 to ensure that it had complying fuel in Chevron-branded service stations on January 1, 2005. All of these investments and actions signify Chevron’s substantial interest in this matter,” in *State of Georgia v. Johnson*, Amicus Curiae brief of Chevron U.S.S. Inc., April 20, 2005.

¹³ “Roll Out the Oil Barrel,” *Washington Post*, May 1, 2005, B-2.