Biofuels Are Helping Your Pocketbook and Our Environment

Gas prices would be significantly higher without ethanol in the market.

With gas prices reaching $4 per gallon, consumers and businesses are suffering. Yet analysts conclude that gas prices would be even higher if ethanol were not in the market today. Fifty percent of gasoline in the United States is blended with ethanol. That means that the high cost of oil is mitigated to some extent by having this cheaper alternative fuel in the mix.

- The head of global commodity research at Merrill Lynch recently noted that oil prices would be at least 15 percent higher if not for the moderating influence of ethanol in the transportation fuels market.[1] At $125 per barrel, this translates into more than $140 billion in savings to U.S. consumers in one year.[2]

- The positive impact of ethanol on gas prices will likely increase as oil prices continue to post record highs. If we make a fairly conservative assumption that gas prices will level off at $3.50 per gallon, and ethanol will keep prices about 15 percent lower, then the nation will save $85 billion annually once all U.S. gasoline is blended and sold as E10.[3] That's money that stays in the U.S. economy and saves the average driver $300 per year.[4]

Increases in ethanol production are not driving food shortages and price increases in the market today.

Ethanol has had only a minimal effect on corn prices, and biofuels in general are not a major contributor to food price increases.

- Recent studies have found that food prices have sharply increased recently due to an unusual confluence of unrelated factors, including[5] –
  - **high oil prices** (used both in transportation and production of food)
  - **increasing demand** from developing economies
  - **speculative fund activities** in futures markets
  - **drought** in key producing areas such as Australia and Eastern Europe
  - **Asian industrialization and urbanization** encroaching on farmland.

- Although about 25 percent of the U.S. corn crop in 2007 was used to produce biofuels, this statistic is not meaningful when considered in isolation from the broader market picture.[6]
  - U.S. **corn exports have been stable** throughout this decade, despite the increase in ethanol production.
  - One-third of each ton of corn used for ethanol production is recovered as a protein-rich livestock feed (known as DDGS). Thus, only 16 percent of the corn crop by mass is used for fuel production.
  - Corn yield per acre increased by 119 bushels per acre between 1949 and 2007, or about 2 bushels per acre each year. If we convert to ethanol only the additional corn available due to yield increases from 1978 through 2015, we are capable of meeting the 2015 corn ethanol cap of 15 billion gallons—with over 200 million gallons to spare.
  - Today, only 1 percent of farmland worldwide is used to grow biofuels.

That is not to say that policymakers should ignore the potential impact of biofuels in the future. As production of biofuels increases, we need to ensure that sufficient food crops are grown. That is why the new energy legislation puts a cap on ethanol produced from corn. Rather than abandon biofuels as an important part of our energy solution, we must develop and enforce smart land use policies and international trade standards.

Ethanol is reducing greenhouse gas emissions today, and will reduce them even more in the future.

- Today, on average, ethanol made from corn reduces life-cycle greenhouse gases by about 20 percent relative to gasoline.[7]
- In the future, biofuels made from non-food cellulosic resources, like agricultural and forest residues as well as energy crops, will reduce greenhouse gas emissions by as much as 86 percent relative to gasoline.[7]

Ethanol is helping reduce our nation's dependence on foreign oil and improve our trade balance.

- The United States imported 65 percent of its crude oil supplies in 2007 at a cost of more than $333 billion, accounting for more than 45 percent of the record trade deficit.[8]
- In 2007, U.S. production of 6.5 billion gallons of ethanol[9] helped to reduce foreign petroleum imports by 4.3 billion gallons and reduce the U.S. trade deficit by $9 billion.[10]

We must keep in place the new legislative requirement to increase U.S. use of renewable transportation fuels to 36 billion gallons by 2022.

- The Energy Independence and Security Act contains statutory "checks and balances" to study and avoid potential negative impacts on nutrition, ecology, and life-cycle emissions.
  - The Renewable Fuels Standard targets are considered feasible given the Oakridge National Laboratory's Billion Ton Study of 2006
  - Ethanol production from corn is capped at 15 billion gallons per year
  - EPA is authorized to waive targets annually as appropriate
  - Greenhouse gas reductions, which include impacts from indirect land use
  - Regular environmental impact studies are required.
- Strong, enforceable regulations that demonstrate the intent to maintain the new Renewable Fuels Standard are necessary to send a clear market signal and thereby advance the U.S. cellulosic biofuels industry.
- Global energy demand is projected to grow by 57 percent from 2004 to 2030. This projection, combined with our need to reduce greenhouse gas emissions, compels us to reduce our energy demand through efficiency and enhance our use of renewable fuels. We have no choice but to pursue all of our renewable options—biofuels must be part of our national and global energy strategy.[11]

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1. P. Barta, "As Biofuels Catch On, Next Task Is to Deal with Environmental, Economic Impact" Wall Street Journal, March 24, 2008, page A2.
2. Based on EIA data of US petroleum products consumption of 20.7 billion barrels per day and a Merrill Lynch analysis that ethanol is responsible for a 15% decrease in the price of oil and gasoline products (20.7 billion barrels/day x 365 days/year x 18.7 $/barrel = 140 billion $/year).
3. Assumes US gasoline demand at 140 billion gallons and cost of fuel would be 15% higher or $4.12 per gallon if ethanol were not used in the fuel blend.
4. Assumes average consumer drives 12,000 miles per year and obtains 20 miles per gallon.
5. D. P. Anderson, J. L. Outlaw, H. L. Bryant, J. W. Richardson, D. P. Ernstes, J. M. Raulston, J. M. Welch, G. M. Knapek, B. K. Herbst, and M. S. Allison "The Effects of Ethanol on Texas Food and Feed", Agricultural and Food Policy Center, Texas A&M University, Research Report 08-1, April 10, 2008, www.afpc.tamu.edu. "Australia's food bowl lies empty", BBC News Tuesday, 11 March 2008, http://news.bbc.co.uk/2/hi/asia-pacific/7289194.stm. "Asian Development Bank: there is no food shortage" http://new.asianews.it/index.php?l=en&art=12095.
6. National Agricultural Statitics Service www.nass.usda.gov/QuickStats/index2.jsp
7. Wang et al, Environmental Research Letters, Vol. 2, 024001, May 22, 2007.
8. Energy Information Administration, Monthly Energy Review, www.eia.doe.gov/oiaf/aeo/, May 2008, National Bureau of Economic Research, www.nber.org.
9. www.ethanolrfa.org/resource/facts/energy/
10. Based on $2.07/gallon RBOB Regular gasoline, New York Harbor, futures price in 2007, 6.5 billion gallons x 0.67 x $2.07/gallon = $9 billion, www.eia.doe.gov, .
11. Highlights Energy Information Administration / International Energy Outlook 2007, www.eia.doe.gov/oiaf/ieo/pdf/highlights.pdf