

# Ethanol Keeps Gasoline

## Prices \$1.09 Cheaper

The Center for Agricultural and Rural Development (CARD) released on May 15 a study<sup>1</sup> by economists at the University of Wisconsin and Iowa State University examining the impact of increased ethanol consumption on wholesale gasoline prices. The study, authored by Professors Dermot Hayes and Xiaodong Du, is an update to a 2009 peer-reviewed paper published in the journal Energy Policy.<sup>2</sup>

### Cheaper Prices at the Pump:

The research by Professors Hayes and Du found significant gasoline cost reductions associated with domestic ethanol production and use. These price impacts include:

- In 2011, ethanol reduced wholesale gasoline prices by **\$1.09 per gallon nationally**.
- From January 2000 to December 2011, the growth in ethanol production reduced wholesale gasoline prices by **\$0.29 per gallon** on average across all regions, equivalent to “a **17% reduction** over what gasoline prices would have been without ethanol production.”



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2011

### More Money in Americans' Pockets:

The reduction in gasoline prices due to ethanol has very real benefits for the average American household budget, including:

- Ethanol reduced the average American household's spending on gasoline by **more than \$1,200 last year**, based on average gasoline consumption data.<sup>3</sup>
- Since 2000, ethanol has helped save **\$39.8 billion annually** in excess gasoline costs – roughly **\$340 per household per year**.
- The 2011 impact of \$1.09/gallon is up from \$0.89/gallon in 2010. The authors attribute the more pronounced impact to “increasing ethanol production and higher crude oil prices,” as well as “[a] wider than normal price differential between ethanol and gasoline prices.”

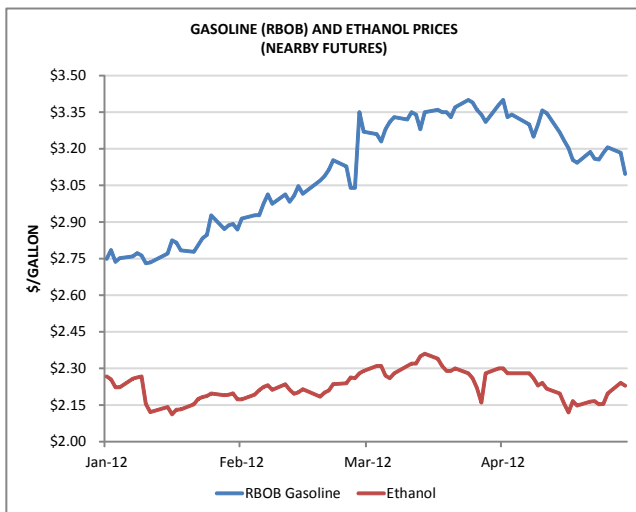
1. <http://www.card.iastate.edu/publications/dbs/pdf/files/12wp528.pdf>

2. Available for purchase at: <http://www.sciencedirect.com/science/article/pii/S0301421509002584>

3. In 2011, American drivers consumed 131.2 billion gallons of gasoline for transportation (Energy Information Administration) and there were 116.7 million U.S. households (Census Bureau). Thus, each household consumed 1,124 gallons gasoline on average. Increased ethanol use reduced gasoline prices by an average of \$1.09 per gallon in 2011 (Hayes & Du, 2012), resulting in \$1,225 in reduced spending on gasoline for the average household.

## Cost Competitiveness, Oil Displacement Drive Savings

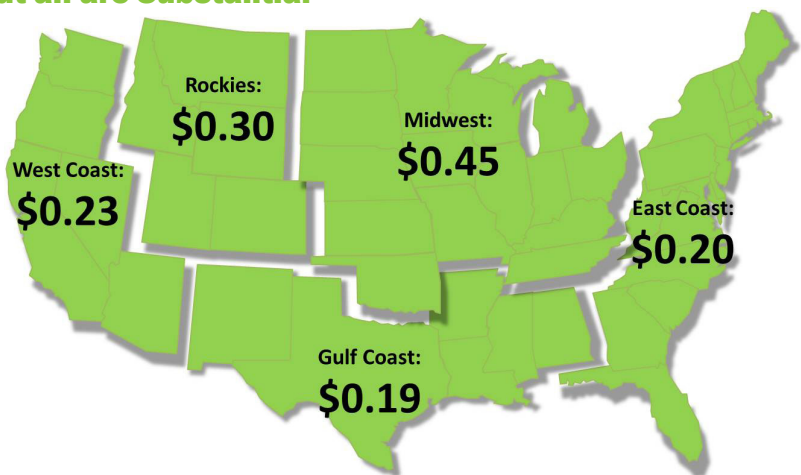
Several factors, from surging ethanol production to the wholesale price differential between ethanol and gas, contribute to ethanol's price dampening effects on gasoline prices. According to the CARD study:



- “The surge in ethanol production in recent years has essentially **added 10% to the volume of fuel available for gasoline powered cars** and in so doing it has allowed the US to switch from being a major importer of finished gasoline to a major exporter of both gasoline and ethanol.”
- “Average crude oil price increased from about \$80/barrel in 2010 to about \$95/barrel in 2011. Correspondingly, average U.S. wholesale gasoline prices have risen 30% from 2010-2011. **A wider than normal price differential** between ethanol and gasoline prices provides further economic incentives for ethanol production and consumption...”

## Price Reductions Vary Regionally, but all are Substantial

Logically, the ethanol's impact on gas prices varies regionally based on how much ethanol is used in a given area. According to the study, the most profound price reductions over the past 12 years have occurred in the Midwest. The map (right) shows average regional wholesale gasoline price reductions due to ethanol from 2000-2011 (\$/gal).



## Energy Content a Negligible Factor

When confronted by irrefutable facts regarding ethanol's price performance, critics immediately resort to the old standby argument that ethanol's lower energy content means it must be priced below gasoline to provide the same cost per mile. In discussing the impacts of ethanol's lower energy content on gasoline spending, the authors cite research from the EPA noting that 10% ethanol blends result in just a 2.5-3% reduction in mileage. They conclude that the "...impact of ethanol's lower energy content on gas prices is much smaller than the price impacts we have measured and does not change the overall conclusions of our analysis.”

## The Bottom Line

This spring, gasoline prices have flirted with the \$4 per gallon mark for the second time in four years. America's ethanol producers have responsibly built out a domestic renewable fuel industry that provides a cost-competitive, carbon-reducing, job-creating alternative to high-priced imported oil. As this new CARD research demonstrates, the gas price benefits of increased ethanol use go far beyond the simple price savings seen at the gas pump.