



A Redundant Subsidy

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Even if you are a staunch proponent of U.S. biofuel policy, it is hard to argue that the current subsidy on grain ethanol serves the purpose it was designed to serve. Further, it does not help ethanol producers compete against oil companies. Why? Because we now have mandates. As I will explain here, this nullifies the purpose of the subsidy.

But first, how did we get to this point? In an effort to spur development of a domestic renewable fuel industry and wean the U.S. off of foreign oil, the U.S. government introduced tax credits for ethanol usage with the Energy Tax Act of 1978. The tax credit was an exemption to the Federal Excise Tax on gasoline, and amounted to \$0.40 for every gallon of ethanol blended into gasoline at the 10% level (increased to \$0.60 per gallon in 1984 and gradually decreased to the current level of \$0.45 per gallon).

(**Note:** This [was also published](#) to Forbes' energy blog.)

During the 1980s, the subsidies were increased, government-backed-loans were provided to ethanol producers for plant construction, and an import fee was implemented to help protect domestic ethanol producers from cheap imports. Despite these measures, the ethanol industry struggled to make headway. The majority of the ethanol plants that were built in the early 1980s were out of business by the mid-80s.

However, the plants that were able to stay in business increased production from under 200 million gallons per year in 1980 to 900 million gallons in 1990. Production slowly continued to grow, reaching 1.6 billion gallons by 2000 and 3.9 billion gallons by 2005. However, there were still two glaring problems at that point.

First, while production had grown substantially over the years, it still amounted to a tiny fraction of U.S. gasoline demand. As ethanol production expanded by 3 billion gallons per year from 1990 to 2005, U.S. gasoline demand grew by 30 billion gallons – to 140 billion gallons per year. Petroleum imports grew by 5.7 million barrels per day (87 billion gallons per year). Clearly, if the purpose of U.S. biofuel policy was to reduce dependence on petroleum imports, ethanol was at best having very little impact.

The second glaring problem was that ethanol could not compete head-to-head with gasoline on price. The state of Nebraska has tracked gasoline and ethanol prices since 1982, and despite all the financial incentives for ethanol, the average annual price of ethanol had exceeded the price of gasoline in every single year on record through 2005. (See [Ethanol and Unleaded Gasoline Average Rack Prices](#)). Not only was ethanol more expensive on a per gallon basis, but since it contains only 2/3rds the energy content of gasoline, consumers would find themselves filling up

more frequently when using ethanol blends.

The result was that the cost per mile for consumers on the ethanol component of their fuel was double or even triple the cost of the gasoline component. However, with a 10% blend, the impact of the higher cost was diluted such that it was likely not obvious to most consumers. But for gasoline blenders, ethanol at equal to or higher than the cost per gallon of gasoline was not a price that would compel them to buy ethanol.

So the U.S. government decided to force the issue by mandating ethanol usage in the Energy Policy Act of 2005. The mandate started with 4 billion gallons of ethanol in 2006 – just about the amount that was being produced at that time - and initially increased each year to 7.5 billion gallons of ethanol by 2012. An ethanol gold rush ensued, capacity was overbuilt, and suddenly the industry found itself in deep financial trouble as ethanol supply exceeded the mandates.

Again, the government rode to the rescue by accelerating the mandates in the Energy Independence and Security Act of 2007. Instead of mandating 7.5 billion gallons of ethanol in the fuel supply by 2010, the new mandate was for 12 billion gallons in 2010 and 15 billion gallons by 2015. But one thing Congress did not do was eliminate the ethanol subsidy. This begs the question, “If there is a mandate in place, what is the purpose of the subsidy?” The original intent was of course to give a boost to ethanol producers who were trying to compete with gasoline, which was the entrenched contender. However, producers no longer need that boost because gasoline blenders have to buy the ethanol whether they like it or not.

As many ethanol producers have argued – the gasoline blender and not the ethanol producer receives the subsidy anyway. The gasoline blender – ExxonMobil for instance – buys ethanol for \$1.70 per gallon (currently), receives a tax credit worth \$0.45 per gallon (the credit was reduced to that level in 2009), and then blends it into gasoline that is presently wholesaling at approximately \$1.90 per gallon. With the tax credit, the current price of ethanol on an energy equivalent basis to gasoline is just about equal to the \$1.90 wholesale price of gasoline. So the tax credit compensates the gasoline blender for blending in a higher cost feedstock.

But what if the tax credit were not there? Would ExxonMobil blend less ethanol? No, they are mandated to blend a certain amount, and if they fail to do so they are penalized. So in the event that they did not get the tax credit, then the energy equivalent price they would pay for ethanol would be about \$2.50 per gallon (based on ethanol’s current spot price). At a 10% blend, this would mean that at current prices the price charged for a gallon of ethanol-blended-gasoline would need to rise about six cents to keep the gasoline blender’s costs equivalent to the cost they currently have with the tax credit in place. The only difference would be that the cost would then be borne directly by drivers in proportion to the number of miles they drive.

In my view, the ethanol subsidy is now redundant with the mandates in place. Removing the subsidy would shift the burden from all taxpayers – regardless of whether or how much they drive – proportionally to those who are using the fuel. Further, elimination of the administration of the subsidy would net two additional benefits.

There would be some efficiency and cost savings as the government got out of the business of administering the program and processing payments for gasoline blenders for the ethanol they use. And because of the slight rise in fuel prices (which should be more than compensated for by the savings from eliminating the subsidy), a small amount of fuel conservation may result. This would have the benefit of actually having some small impact on our petroleum imports.

Even if you are solidly in favor of U.S. biofuel policy, with a mandate in place none of the usual

arguments apply. The old argument that “oil companies get subsidies, and therefore so should ethanol producers” is irrelevant. With the mandate, the ethanol company isn’t competing with the oil company, because the oil company has to buy the product. The ethanol company is essentially competing against other ethanol companies for the blender’s business. So let’s eliminate this redundant subsidy, put the burden of our biofuel policy where it belongs, and save a few tax dollars in the process.



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