

Is This the End of Ethanol?

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Ethanol burst upon the scene in 2006 and became hugely popular, both with investors and the general public. It was thought that ethanol would reduce greenhouse gas emissions, stop global warming, solve America's addiction to oil imports, and create energy independence. Ethanol usage was mandated when it was passed into law that ethanol would replace an additive blended into gasoline. Investors jumped on board, and ethanol stocks shot up.

But ethanol always had critics. People pointed to the fact that it was not energy efficient, that it contained less energy per gallon than gasoline, that ethanol plants polluted and used excessive water, and that ethanol still produced air pollution when used in cars. Critics said that corn for ethanol would compete with corn for food, raising the price of corn in supermarkets, and of animals that eat corn. Critics said that cropland for ethanol would compete with cropland for other crops, raising all food prices. Critics said that ethanol could never replace gasoline, because to make enough ethanol to do so would expand all of the problems associated with ethanol. Even more dangerous, as Altenews reported at the time, too many ethanol plants were being created, making too much ethanol capacity, far more than demand and the market could support.

In late 2007 all of these problems came to the attention of the public, and the ethanol speculative bubble burst. Now, the critics of ethanol feel that they have won, and their vindication comes in the form of a recent paper in the journal "Science." This paper claims that when the carbon released from land cleared for ethanol crops is taken into account, ethanol has no environmental benefit at all.

So, is this the end for ethanol? Is now the time to abandon ethanol, or should one look at ethanol stocks as good buys, in the hope that ethanol will stage a comeback in the future?

We at Altenews.com are cautiously optimistic about the long-term prospects for ethanol. We feel this way for three reasons: 1. technology, 2. energy independence, and 3. the environment.

First, technology: The technology for making ethanol from corn or sugarcane is fairly standard. But a technological breakthrough in ethanol is on the horizon. This will come in the form of cellulosic ethanol. Whereas corn ethanol is made from the starch in corn, cellulosic ethanol is made from the sugars in the cellulose of plant matter. Cellulosic ethanol promises to solve many of the problems associated with corn ethanol. It will be more energy efficient and produce much less pollution. It can be made from inedible biomass, such as corn stalks, sugarcane bagasse, sawdust and paper pulp, inedible crops such as switchgrass, and also from plant matter in garbage. Because of this, it will not compete with the food supply. It will also be able to be made in large quantities, enough so that instead of merely acting as an additive in gasoline, it will be able one day to replace gasoline (perhaps replacing as much as 20% by 2030). Some people believe that cellulosic ethanol will be commercially viable by 2020 and will overtake gasoline by 2050. That may produce surprising growth for ethanol companies.

Second, energy independence: Putting all environmental concerns aside, there are still plausible political and economic reasons for promoting ethanol. America's addition to imported oil forces America into areas of the Middle East and elsewhere that involves costly military commitments in unstable and conflicted regions. By replacing some of our oil use with domestic ethanol, we can shift our focus from interfering in other areas to promoting our success at home. For this reason it will be necessary for the government to continue supporting ethanol projects in the U.S. Also, ethanol is necessary for economic reasons. Ethanol in America gives a new source of income to struggling farmers in the Midwest and is a great help to the American economy. (RFA estimates the new Renewable Fuels Standard will add \$1.7 trillion to GDP and create 1.1 million new jobs from 2008 to 2022.) Farmers are now able to rely not only on food but also on fuel for their income. Mandates for ethanol usage could help stabilize ethanol demand, and the growing number of flex-fuel cars and E85 gas stations will also add to demand. If America could become a center for fuel production (with the help of cellulosic ethanol), it could turn America into an energy powerhouse such as the Middle East is for oil right now. This could spark a new energy-based renaissance in the American economy.

Third, the environment: Corn-based ethanol does have many factors that make it less than ideal as a solution to our environmental problems. It uses a lot of water and is sometimes made in coal-fired plants. But studies have found that it is still better than using gasoline, in terms of the greenhouse effect. When cellulosic ethanol is perfected for commercial usage, it will solve many of the environmental problems of ethanol. This is helped by the fact that crops soak up carbon as they grow.

The critics of ethanol should learn that there is a growing debate on this subject. In answer to the "Science" report, this report assumes that if the land is not cleared for ethanol crops, it will be not be cleared at all. But this is not a useful assumption. In a growing American economy, and a growing world economy, with a continuously growing population, it will be necessary to continuously clear land for new crops to support the growing populace. The only question is what we do with the land, not whether we clear it or not. Thus, land clearing should not be a factor.

Furthermore, even if one does consider land clearing to be a factor, to a large extent land clearing will not be necessary to provide biomass feedstock for cellulosic ethanol. Cellulosic ethanol can be made from corn stover, sugarcane bagasse, and rice straw, all naturally occurring waste byproducts of land already in use making corn, sugarcane and rice. It can also be made from wood chips, sawdust and paper pulp, already naturally occurring from logging and manufacturing. It can also use vegetable matter in garbage as a feedstock, which will not require land clearing but which will reduce landfill dumping. A vast quantity of cellulosic ethanol can be made in the USA without any new land clearing at all. Thus, carbon release from land clearing is not a major factor for cellulosic ethanol.

With this key assumption, that land clearing should be factored into the equation, challenged and dismissed, the “Science” study’s findings relating the environmental benefits of ethanol fall apart. Other studies have found that corn-based ethanol is 30% better for the environment than oil-based gasoline, and that cellulosic ethanol may be 80% better.

In conclusion, we must look at what this means for investors. To a large extent, the ethanol bubble was propped up by unjustified hype and “irrational exuberance.” Losses in ethanol are unlikely to be recovered in the short-term, and there are a number of ethanol stocks which were overvalued and which will not recover. It will take some time before demand is capable of sustaining the ethanol capacity that exists or is under construction. But for the larger ethanol companies, and the ethanol companies that are more stable because of non-ethanol business, there is some hope that in the future these stocks may once again reap benefits from ethanol. Each ethanol stock must be looked at individually to see if it has the strength to weather the storm and one day cash in on a return to ethanol. One must look closely because those ethanol companies that are positioning themselves to develop and use cellulosic ethanol will be able to dominate the ethanol industry once the cellulosic ethanol technology matures. Some ethanol stocks are still bad buys no matter what, but to some degree the ethanol stocks may have gone from being overvalued to being undervalued. This is not the end for ethanol, in fact it is just the beginning.

Investors who want to know more about ethanol investment opportunities should read the upcoming Altenews.com research report on cellulosic ethanol, due out later in 2008.