



The Industry: Yesterday, Today and Tomorrow

By Larry Johnson

I feel fortunate to have seen and participated in a truly historic event: the birth and development of the U.S. ethanol industry. Some of us can remember the early struggles and the numerous times that experts predicted an imminent end to this “silly biofuels phase.” We have seen policies change, loan guarantees rescinded, the “payment-in-kind” corn reduction program, \$9 per-barrel crude oil, 80 cents-per-gallon ethanol, countless articles about damaged engines, net energy nonsense, questionable air modeling studies, the rise and fall of MTBE, shortages of investment capital, foreign competition, \$5 per-bushel corn (twice) and a continual stream of special interest opposition who ignore any analysis of the big picture.

Having seen the predicted demise of this industry several times, it becomes very difficult to understand today’s negativity and even panic caused by high corn prices and ethanol prices lower than RBOB. This is particularly true when we have experienced similar market cycles before and normal market forces are already at work to correct them. The American farmer is impatiently waiting for spring to increase production in response to these profitable prices, and gasoline terminals are racing to install ethanol infrastructure to take advantage of huge blend margins.

Let’s face it, we are in a very commodity-sensitive business. However, our objective is not to gamble on fickle commodities markets, but to add value through investment, technology, smart decisions and hard work. In addition to saving the world, that is

our mission. The opportunities to add value to raw agricultural commodities and even waste products have never been greater.

Understandably, there are reasons for caution and respect for the unknown because we are truly in uncharted territory. We can’t remember when the “century of oil” began, but we have all heard stories about the demise of the whale oil industry when kerosene was introduced and the opposition to the automobile by the infrastructure servicing the horse transportation industry. In fact, as a kid, I would yell “get a horse” out the window when we passed a stalled car, never having any idea where the concept came from. We are moving rapidly into the new era of renewable energy. We have already done much of the heavy lifting by overcoming introductory hurdles of efficient processing, product distribution, consumer acceptance and attracting capital. We are now a market force that upsets the status quo.

Many of the earlier barriers to ethanol production were overcome through technology and perseverance that either improved our product or exposed the opposing arguments as myths. Let’s take a look at the current opposition to our industry and see which concerns are legitimate and which myths might be exposed.



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Concern No. 1: We are over-producing for the market.

Our recent growth can be attributed to attractive crush margins, but also to the fact that it is a product whose time has finally come. There is no doubt that ethanol prices are currently depressed relative to gasoline and that large ethanol supplies are a contributor. However, we are still only about halfway to a saturated

market for E10 and there is a rapid buildup of infrastructure to take advantage of attractive blend margins. There is also a growing momentum for both E85 and higher blends that will impact the marketplace in the years ahead.

While the distribution and blending infrastructure continues to build, there is no doubt that the rate of new plant expansion is dramatically slowing. No one

knows the exact pace of each of these market factors, but momentum in a free market economy is always a bit slow to turn. It is inevitable that we will see ethanol demand once again outpace production. Each of us must study the available data, our financial position and appetite for risk to determine how best to position ourselves over the coming years. These decisions must not be based on special interest reports or sensational headlines, but on market factors, price cycles and the rich heritage of an industry that has overcome every obstacle it has faced.

Concern No. 2: Ethanol has lost its value relative to gasoline.

The current ethanol price discount to gasoline is purely a factor of supply and demand combined with market psychology. Why would any buyer bid higher for a forward contract when current supplies are adequate and rumors of an additional 5 billion gallons coming on line this year are in every news story? Ethanol has taken some recent abuse for its Btu value, but the positive attributes of octane, oxygen, performance, gasoline replacement and carbon footprint will prevail as markets adjust and public policy favors domestically produced and environmentally friendly fuels.

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Concern No. 3: There will no longer be a place for independent greenfield plants.

Consolidation is taking place, but not at the level predicted by many financial analysts. There will no doubt continue to be some very large producers, but that is positive, as it provides credibility and comfort to many of our oil company customers who seem a bit befuddled by dealing with small producers.

After the initial “ADM era,” this industry was built by farmers and individual investors who invested for the long term, anticipating a reasonable return on investment and a growth in value. This model is still viable, as a well-managed plant will continue to provide value in excess of many opportunities available in rural America. Renewable resources can be produced forever in our fertile heartland, while petroleum is finite and we have already exhausted the majority of our domestic supplies.

Historically, agricultural prices have been depressed far

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more than they have been above the cost of production, and farmers have depended on government payments. Farmers have never failed to respond to high prices and market demand, resulting in short-lived bull markets. Obviously, the current demand-driven rally appears to be one of historical significance, but that only means that it will probably get a historical response. Beyond that, it only seems logical that converting agricultural products (including biomass) to energy will provide an opportunity for value-added profits until we discover a new and sustainable source of energy beyond petroleum.

Moreover, the longer term future for ethanol must certainly come from using a variety of biomass feedstocks. By their very nature of variety and transportation logistics, cellulose will support the concept of smaller and more localized processing centers, providing a wide range of new opportunities for rural communities and investors.

Concern No. 4: Project financing has dried up.

That’s the current word on Wall Street, but maybe Wall Street is not the best source for financing. This industry was built on private investors that believed in what they were doing. After all, brokerage houses and hedge funds now say that a commodity-based business is “too risky,” yet the current commodity boom is being fueled by those same funds because it is reported that “commodities are a safe haven.” Go figure.

As soon as the current fear of the unknown leaves the commodity markets, investors will once again focus on the real balance sheet items and the potential return on investment from investments in renewables. Well-managed ethanol plants over the past decade have provided investors with returns far higher than bonds, mutual funds, the stock market or most other investment opportunities.

Let’s not lose sight of the fact energy demand, global

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warming and the instability of oil economies led to the passage of a 36 billion-gallon renewable fuels standard. Full implementation of this standard will require a capital investment of close to \$100 billion over the next 14 years. In fact, some delegates to the recent Washington International Renewable Energy Conference said the world must spend as much as \$3 trillion by 2030 to avert a global environmental crisis. These funds will become available when the focus moves away from the sensationalist headlines and returns to the hard facts that consumers are demanding alternatives to oil. Biomass is a solution that will only get better as infrastructure is built and technology continues to improve.

The current myths that beg us to believe ethanol will cause mass starvation, deforestation and global warming are only tools used by the opposition to protect their own turf. Sometimes it helps one's perspective to revert to some basic facts when determining where fingers should be pointing. For instance:

- ▶ In 1973 a bushel of corn and a barrel of oil both traded for about \$3.

- ▶ The United States is the world's greatest agricultural producer, but 60 percent of our oil is imported.

- ▶ Corn yields continue to increase, while oilfield yields continue to decrease.

- ▶ Ethanol technology is still in its infancy while oil technology is mature.

- ▶ Ethanol production enhances our gross domestic product while oil imports diminish it.

- ▶ Domestic ethanol stimulates our economy, oil imports are recessionary.

- ▶ American consumers are finally reacting to high gasoline prices and are beginning to realize that alternatives to oil are necessary.

- ▶ Future ethanol will have greenhouse gas emissions criteria, enabling further differentiation from oil.

All ethanol is not created equal. The Energy Independence and Security Act of 2007 will require future ethanol production to define its "carbon footprint" as related to greenhouse gases. The footprint will be determined by the U.S. EPA, using Argonne National Laboratory's

Greenhouse Gases, Regulated Emissions and Energy Use in Transportation Model and the Food and Agricultural Policy Research Institute model from Iowa State University. Different carbon values will result in different prices, creating opportunities, public support and a cleaner environment.

It is going to be a fascinating time ahead where opportunities will far outnumber the pitfalls, but it will take vision, discipline, management, a lot of hard work and of course, a certain amount of

risk. Then again, those are the same values that got us to where we are today. To be honest, today's industry is what many of us dreamed about 20 years ago; it just snuck up on us and is no longer a dream.
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