

Biofuels: A Losing Proposition

by Christine Craig

Using the ethanol industry's own highly optimistic assumptions about energetics and crop yield, two top U.S. scientists demonstrate that corn-starch ethanol is a losing proposition as a replacement for petroleum, and that cellulosic ethanol, although providing more potential fodder for the distillery, still falls short in volume and energetics. The entire U.S. corn crop, they show, would provide only 3.7 percent of our present transportation fuel needs, and the entire U.S. cropland would produce only 15 percent of our needs—by the most optimistic of assumptions. And this option would leave us without domestic food production capability, for human or animal use!

The scientists are James C. Jordan and James R. Powell, writing in an op ed in the July 2 *Washington Post*, "The False Hope of Biofuels." Both authors understand the energetics and supply parameters of biofuels and fossil fuels. Powell was one of the inventors of the superconducting maglev train in the early 1960s, while he was at Brookhaven National Laboratory. That invention provided the technological breakthroughs behind the maglev efforts of the Japan National Railroad, which is now constructing a 500-mile maglev line from Tokyo to Osaka. Until recently, he was one of the directors (along with David Danby, the co-inventor of the superconducting maglev), of Maglev 2000 of Florida Corp.

James C. Jordan is a former energy research program director for the United States Navy, and CEO of the HCE Company, an energy technology development firm. Both authors are now with the Maglev Research Center at the Polytechnic University of New York.

These scientists and businessmen of the World War II-generation laid bare the bankrupt notion of fueling our present or future transportation energy needs with modern-day biomass as a substitute for dwindling supplies of ancient, stored biomass in the form of petroleum—and they did it without mentioning the red herrings of global warming, security from foreign oil, or propping up the American farmer.

Despite such signs of sanity, the ethanol mania is raging through the country. The financial news service Bloomberg called biofuels investing a "frenzy" that is sweeping up venture capital money. Three years ago, the ethanol producer, Aventine Renewable Energy LLC, was bought by Morgan Stanley for \$66 million, and is now worth \$750 million. Goldman Sachs invested more than \$26 million into the Canadian cellulosic ethanol company, Iogen, in May of this year. Chev-

ron and other oil companies have been investing in ethanol distilleries to secure a stable supply of the precious liquor, in preparation for the implementation of the Renewable Fuel Standard of the 2005 Energy Act.

Microsoft billionaire Bill Gates and his venture capital company, Cascade Investments LLC, last year invested \$84 million in Pacific Ethanol, which is building a 35 million gallon-per-year plant near Fresno, Calif., and is planning four more. Richard Branson of Virgin Group, is looking to sink \$300 to \$400 million into ethanol investments. And Sun Microsystems founder, Vinod Khosla, another fabulously wealthy investor, has been buying up ethanol concerns like hotcakes.

To top it off, the vulture cartel Archer Daniels Midland, the largest ethanol producer in the United States, more than doubled its income last year, to \$1 billion—the largest annual profit in the company's long history. So much for farmer/co-ops driving the ethanol boom.

Behind the Smoke and Mirrors

What's behind the biofuels mania? Are these successful companies investing in a golden opportunity, riding the wave of the future of American energy policy—or are they as blinded by greed and market hype as Issac Newton, who, in the South Seas Bubble, lost his shirt?

Even the average ethanol enthusiast will admit that the starch fermentation and distillation of corn kernels to produce fuel ethanol is never going to supply more than a miniscule amount of U.S. transportation fuel needs. But the favorite argument of the ethanol enthusiasts is to promote "cellulosic ethanol," that made from corn husks and other green matter, which requires some technological breakthroughs to supposedly become efficient enough to replace gasoline. Then, the enthusiasts claim, we will be able to harvest vast areas of the United States for "energy" crops: switchgrass, corn stover, wood waste, even special "energy" forests.

This cellulosic ethanol fantasy has taken hold of the imagination of greenies and venture capitalists alike: at the heart of the matter, are fat Federal subsidies and Federal and state mandates for more biofuels, and "renewable" energy in general. There is a substantial set of "supply-side" incentives for the two main biofuels—ethanol and biodiesel—including tax subsidies, grants, loans and leases, rebates, exemptions, fuel discounts, and technical assistance.

The most important Federal legislation in this regard extends the tax credit on ethanol, now 51 cents per gallon, through 2010. Another important Federal incentive to encourage "small" producers of ethanol—producing less than 60 million gallons per year—is the updated Volumetric Ethanol Excise Tax Credit (VEETC), which allows a 10-cent a gallon credit for up to 15 million gallons produced. Several farm belt states have legislated more such credits.

To assure a guaranteed market for the product, the Federal Renewable Fuel Standard (RFS) mandates that 4 billion gallons of ethanol and biodiesel must be mixed into transporta-

tion fuels in 2006, and that 7.5 billion must be used by 2012. The RFS will be enforced and implemented by the Environmental Protection Agency.

At least six states, including Hawaii, Iowa, Louisiana, Minnesota, Montana, and Washington, have also mandated various timetables for required percentages of biofuels to be mixed with transportation fuels. More will certainly follow.

California already has a host of renewable energy standards, and is pondering a requirement to increase total biofuels consumption to 1.2 billion gallons by 2010, and 2 billion by 2020. There is also another form of renewable fuels “subsidy” in action in California. The two massive California public retirement systems, the California Public Employee Retirement System (CalPERS) and the California State Teacher Retirement System (CalSTRS), have committed hundreds of millions of dollars to “green” investing of their investment portfolios, as part of California Treasurer Phil Angelides’ 2004 “Green Wave Initiative,” which plans to tie public investment to environmental goals such as reduction of green house gases, energy efficiency, alternative energy, etc.

Given the number of subsidies for the biofuels industries, and the enormous amount of hype coming from Washington, D.C., and the state capitals on the endless potential for biofuels to free America from foreign oil, runaway gasoline prices, and global warming, it is no wonder that speculators expect to make a killing.

Both Democrats and Republicans seem mad about ethanol. President Bush, in his State of the Union address, called for replacing more than 75% of Middle East oil imports by 2025. The speculators see biofuels as the guaranteed inside track, near-term solution for the consensus energy policy imperatives. The lucrative incentives are the writing on the wall.

Meanwhile, most of the rest of the world is moving forward with a nuclear renaissance, to produce nuclear electricity and to use the new, high-temperature reactors to produce hydrogen fuel—a sensible, efficient alternative to petroleum fuels. The United States also plans to go nuclear, and to produce hydrogen, but is proceeding on a long, drawn-out timetable, compared to other nuclear nations.

Speculator Hawks the Ethanol Hype

The case of Vinod Khosla is an example of the modern venture capitalist, positioning himself to cash in on the perceived future market of cellulosic ethanol, while pumping up the present corn/sugar ethanol bubble by word and deed. Khosla has been in the news frequently in the last few years, on behalf of biofuels. “What could be better than a greener fuel that’s cheaper for consumers, that doesn’t feed Mideast terrorism, yet instead fuels rural America?” Khosla asks Stone Phillips on NBC “Dateline” this May. He says that Brazil convinced him that, “in less than five years, we can irreversibly start a path that can get us independent of petroleum.” In

a recent weekly newspaper aimed at the Asian reader, he was featured on the front page, with a headline touting \$1 fuel at the pump with biofuels. And in December 2005, Khosla produced a massive powerpoint called “Biofuels: Think outside the Barrel.” He now has a video out with the same name. On the second slide of his powerpoint, he gets right to the sales pitch:

- We don’t need oil for cars and trucks
- We definitely don’t need hydrogen!
- We don’t need new car/engine designs
- We don’t need new distribution systems
- Rapid (3-5 yrs) changeover of automobiles is possible!
- Shift has little cost to consumers, automakers, government.

Then, on the third slide comes the punchline. Above a photo of a gas pump advertising E-85 (85% ethanol) motor fuel at \$1.89 9/10, Khosla proclaims: “Not so Magic Answer: Ethanol.” For another 110 slides he keeps hammering home the message, with the infectious optimism of a world-class car salesman: Everybody wins with ethanol; farmers win, investors win, producers win, oil companies win, governments win, consumers win, the environment wins. It’s the perfect win/win situation. But . . . to do this, we must immediately institute the following policy measures—a laundry list of new subsidies, incentives, and requirements guaranteed to make ethanol a lucrative investment for suckers of all persuasions.

While Khosla and others of his ilk are luring the lemmings with smoke and mirrors to jump into the transportation fuel bubble, the basis for his whole scheme—a robust automobile industry—is being dismantled faster than new suckers can sign on. The American automobile industry is bankrupt, its workers largely gone, the machine tools auctioned off for pennies on the dollar. Cold-blooded fascist financiers like Felix Rohatyn have midwived the bloody abortion of the American auto industry, as they did the steel industry before it.

The system is coming down, and another South Seas Bubble cannot save it, any more than the first one could bail out bankrupt England three centuries ago. Only a return to sanity and rational action in Congress and other institutions of government, to save the industrial capacity of our nation, as outlined by Lyndon LaRouche, stands a chance of stopping a new dark age.

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