

Green Fuel's Dirty Secret

by Sasha Lilley

The town of Columbus, Nebraska, bills itself as a “City of Power and Progress.” If Archer Daniels Midland gets its way, that power will be partially generated by coal, one of the dirtiest forms of energy. When burned, it emits carcinogenic pollutants and high levels of the greenhouse gases linked to global warming.

Ironically this coal will be used to generate ethanol, a plant-based petroleum substitute that has been hyped by both environmentalists and President George Bush as the green fuel of the future. The agribusiness giant Archer Daniels Midland (ADM) is the largest US producer of ethanol, which it makes by distilling corn. ADM also operates coal-fired plants at its company base in Decatur, Illinois and Cedar Rapids, Iowa, and is currently adding another coal-powered facility at its Clinton, Iowa ethanol plant.

That's not all. “[Ethanol] plants themselves — not even the part producing the energy — produce a lot of air pollution,” says Mike Ewall, director of the Energy Justice Network. “The EPA (US Environmental Protection Agency) has cracked down in recent years on a lot of Midwestern ethanol plants for excessive levels of carbon monoxide, methanol, toluene, and volatile organic compounds, some of which are known to cause cancer.”

A single ADM corn processing plant in Clinton, Iowa generated nearly 20,000 tons of pollutants including sulfur dioxide, nitrogen oxides and volatile organic compounds in 2004, according to federal records. The EPA considers an ethanol plant as a “major source” of pollution if it produces more than 100 tons of any one pollutant per year, although it has recently proposed increasing that cap to 250

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Sulfur dioxide is classified by the EPA as a contributor to respiratory and heart disease and the generation of acid rain. Nitrogen oxides produce ozone and a wide variety of toxic chemicals as well as contributing to global warming, according to the EPA, while many volatile organic compounds are cancer-causing. In 2005, Environmental Defense, a national environmental group, ranked the Clinton plant as the 26th largest emitter of carcinogenic compounds in the US.

For years, ADM promoted itself as the “supermarket to the world” on major US radio and television networks like NPR, CBS, NBC, and PBS where it underwrites influential programs such as the NewsHour with Jim Lehrer. Now, as it actively promotes its ethanol business, ADM has rolled out its new eco-friendly slogan, “Resourceful by Na-

ture” which “reinforces our role as an essential link between farmers and consumers.”

Despite the company's attempts at green packaging, ADM is ranked as the tenth worst corporate air polluter, on the “Toxic 100” list of the Political Economy Research Institute at the University of Massachusetts. The Department of Justice and the Environmental Protection Agency have charged the company with violations of the Clean Air Act in hundreds of processing units, covering 52 plants in 16 states. In 2003 the two agencies reached a \$351 million settlement with the company. Three years earlier, ADM was fined \$1.5 million by the Department of Justice and \$1.1 million by the State of Illinois for pollution related to ethanol production and distribution. Currently, the corporation is involved in approximately 25 administrative and judicial proceedings connected to federal and state Superfund laws regarding the environmental clean-up of sites contaminated by ADM operations.

Friends in high places

Environmentalists have cried foul, but they are up against the 56th largest company in the United States, as ranked by revenue in *Fortune Magazine*. ADM has more than 25,000 employees, net sales in 2005 of \$35.9 billion, with \$1 billion in profits, as well as a recent 29% profit increase in the last quarter. The company is a global force: ADM is one of the world's biggest processors of soybeans, corn, wheat and cocoa, which it buys from growers in the US and around the world. The company recently hired Patricia A. Wozert, an executive vice president of Chevron Corporation, as its chief executive officer.

ADM has another resource at its disposal, the considerable clout it has built up over decades of courting and lobbying Washington's power brokers. Days after the company's February expansion announcement of the coal-fired Nebraska plant, US Energy Secretary Samuel W. Bodman visited ADM's Decatur headquarters to tout its part in President Bush's Biofuels Initiative. The secretary posed for photos with then ADM Chair G. Allen Andreas and announced that the Department of Energy would offer up to \$160 million for the construction of three biorefineries to expand US ethanol production.

“Partnerships with industry like these will lead to new innovation and discovery that will usher in an era of reduced dependence on foreign sources of oil, while strengthening our economy at home,” Secretary Bodman said from ADM's trade floor. Like the

ADM ethanol plant in Columbus, the three biorefineries could well be partially coal-powered, given the absence of conditions imposed by the Department of Energy.

“It’s been some 30 years since we got a call from the White House asking for the agricultural industry, ADM in particular, to take a serious look at the possibilities of building facilities to produce alternative sources of energy for our fuel supply in the United States,” said Allen Andreas, who was chair, chief executive and president of ADM at the time of Secretary Bodman’s visit. “We are delighted to participate in any way that we can in the president’s programs.”

ADM and its signature project have never lacked friends in high places, despite a history of price-fixing scandals and monopolistic misdeeds. The Andreas family, which has headed up the publicly traded company for decades, has cultivated bipartisan support through generous donations to both Republicans and Democrats. Since the 2000 election cycle, ADM has given more than \$3 million in political contributions, according to the Center for Responsive Politics: \$1.2 million to Democrats and \$1.85 million to Republicans. These donations may have helped sustain a multitude of government subsidies to ADM, including ethanol tax credits, tariffs against foreign ethanol competitors, and federally mandated ethanol additive standards.

Politicians from the Midwestern Corn Belt are some of the company’s staunchest allies. Senators Richard Durbin, Charles Grassley and Tom Harkin, and former Representative Dick Gephardt have consistently supported lavish federal tax subsidies to ethanol producers, for which ADM is the prime beneficiary. All are recipients of political action committee donations from the agribusiness behemoth. The *Wall Street Journal* has referred to the former South Dakota senator and Senate minority leader as “Archer Daschle Midland” because of his

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unswerving support for the interests of the company.

ADM’s political heft was behind the 54 cent per gallon tariff that the US government has imposed on imports of sugarcane based ethanol from Brazil, which is cheaper than ADM’s corn-based fuel. The tariff dates back to 1980 when the CEO of ADM

Fueling Exploitation: ADM in Brazil and the Ivory Coast

Greenpeace International recently accused Archer Daniels Midland of funding, along with two other agricultural commodities traders, much of the razing of the Amazon rainforest for soy production. The group claims that ADM, along with Cargill and Bunge, are responsible for 60% of the financing of soy production in the vital rainforest ecosystem. ADM lends money to farmers who plant in areas of the rainforest that have been illegally cleared, alleges Greenpeace, and then finances the shipping of soy out of the region. ADM has set up four grain silos in the Amazon, for the export of soy from Brazil. The primary destination of the soy is Europe where it ends up as high protein cattle feed.

ADM is also currently being sued by the International Labor Rights Fund for alleged involvement in the trafficking, torture and forced labor of children who cultivate and harvest cocoa beans in the Ivory Coast. The suit, which is being filed on behalf of Malian children brought against their will to the Ivory Coast, argues that the company, as well as Nestle and Cargill, has knowingly turned a blind eye to the use of forced child labor in the cocoa plantations where the agricultural processor’s chocolate originates.

“It is unconscionable that Nestle, ADM and Cargill have ignored repeated and well-documented warnings over the past several years that the farms they were using to grow cocoa employed child slave labor,” says International Labor Rights Fund attorney Natacha Thys. “They could have put a stop to it years ago, but chose to look the other way. We had to go to court as a last resort.”

convinced President Carter to adopt it, according to former ADM lobbyist Joseph Karth. Iowa’s Senator Grassley recently stated his intention to block any attempt to remove the tariff on lower-cost Brazilian fuel in the face of rising gas prices, stating that “lifting this tariff would be counter-productive to the widely supported goal of promoting home-grown renewable sources of energy.”

Over many decades, the company has been the recipient of government largesse in the form of federal and state corn and ethanol subsidies that have totaled billions of dollars, prompting the libertarian Cato Institute to declare ADM the biggest recipient of corporate welfare in the US in 1995. ADM has been a prime beneficiary of the federal tax credit on ethanol, which the refiner can apply to the tax it pays on corporate income. First implemented in 1978, the tax credit currently stands at 51 cents per gallon of ethanol sold. The Government Accountability Office estimates the subsidies to the ethanol industry from 1980–2000 at \$11 billion. As the biggest ethanol producer in the US, ADM has received the largest portion of the government’s generosity.

Recent legislation has further greased the tracks of the ethanol gravy train. The Energy Policy Act of 2005’s Renewable Fuel Standard stipulates that gasoline sold in the US must include a certain percentage of ethanol or biodiesel, starting at 4 billion gallons this year and rising to 7.5 billion gallons by 2012. ADM got another boost when the federal government mandated that oil companies replace MTBE, a cancer-causing gasoline additive, with ethanol. Forty-five states have adopted policies to encourage the production and use of the fuel. ADM has responded with plans to increase its output of ethanol by 42% over the next three years.

When corn is king

Subsidies and tax incentives might make public policy sense — even when they flow into the coffers of a Fortune 500 company with mega-profits — but only if corn ethanol delivers on the promise that its

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boosters claim: to significantly cut greenhouse emissions, protect the environment and slow global warming.

Debate has raged for years over whether ethanol made from corn generates more energy than the amount of fossil fuel that is used to produce it. UC Berkeley's Alexander Farrell recently co-authored a comprehensive study, published in *Science*, on the energy and greenhouse gas output of various sources of ethanol. His group found that corn ethanol reduces greenhouse gases by only 13%, which compares unfavorably with ethanol made from vegetable cellulose such as switchgrass. "Our best guess," says Farrell, "is that using corn ethanol today results in a modest decline of greenhouse gas emissions."

Yet the enormous amounts of corn that ADM and other ethanol processors buy from Midwestern farmers wreak damage on the environment in a multiplicity of ways. Modern corn hybrids require more nitrogen fertilizer, herbicides and insecticides than any other crop while causing the most extensive erosion of topsoil. Pesticide and fertilizer runoff from the vast expanses of corn in the US prairies bleed into groundwater and rivers as far as the Gulf of Mexico. The nitrogen runoff flowing into the Mississippi River has fostered a vast bloom of dead algae in the Gulf that starves fish and other aquatic life of oxygen.

To understand the hidden costs of corn-based ethanol requires factoring in "the huge, monstrous costs of cleaning up polluted water in the Mississippi River drainage basin and also trying to remedy the negative effects of poisoning the Gulf of Mexico," says Tad Patzek of the University of California's Civil and Environmental Engineering department.

"These are not abstract environmental effects," Patzek asserts, "these are effects that impact the drinking water all over the Corn Belt, that impact also the poison that people ingest when they eat their

food, from the various pesticides and herbicides." Corn farming substantially tops all crops in total application of pesticides, according to the US Department of Agriculture, and is the crop most likely to leach pesticides into drinking water.

While banned by the European Union, atrazine is the most heavily used herbicide in the United States — primarily applied to cornfields — and the EPA rates it as the second most common pesticide in drinking wells. The EPA has set maximum safe levels of atrazine in drinking water at 3 parts per billion, but scientists with the US Geological Survey have found up to 224 parts per billion in Midwestern streams and 2,300 parts per billion in Corn Belt irrigation reservoirs.

Then there is the question of how practical it is to replace petroleum with corn-based ethanol. "There are conflicting figures on how much land would be needed to meet all of our petroleum demand from ethanol," says Energy Justice Network's Ewall, "and those range from some portion of what we currently have as available crop land to as much as five times the amount of crop land in the US." The Department of Agriculture estimates that the Corn Belt has lost 90% of its original wetlands, two-thirds of which has taken place since draining for agriculture began mid-century.

"No one who's looked at this issue [from an environmental perspective] talks about using corn kernels as the only, or even major component, of the long term solution," counters Nathanael Greene, senior policy analyst with the Natural Resources Defense Council. "Everyone assumes we'll evolve the industry from its current technology to the advanced technologies."

If that happens, it will be a marked reversal of many decades of government policy in support of Archer Daniels Midland — and the company may well wonder what it's getting for its unceasingly ample gifts to both political parties. But with the "full-throated support of the Bush Administration," in the words of the Renewable Fuels Association, a corn ethanol-dominated, ADM-led trade group, that day doesn't seem to be approaching any time soon.

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