

## U.S. News & World Report

February 25, 2008 Monday

### Fresh Profits From the Farm

**BYLINE:** Luke Mullins **SECTION:** HEALTH, MONEY & EDUCATION; Investing; Pg. 59

**HIGHLIGHT:** Global economic growth should keep agricultural prices high

The implosion of esoteric securities tied to subprime debt has saddled the world's most sophisticated financial firms with multibillion-dollar losses and driven Wall Street investors to near panic. So maybe it's a smart time for all those urbane financial engineers, traders, and hedge fund managers to return to the soil--but as a moneymaking exercise rather than a cathartic one.

After an amazing 2007--when wheat futures soared some 77 percent, soybeans 74 percent, and corn 17 percent--the Commodity Research Bureau's grain index reached new all-time highs in February, just as wheat was breaking records of its own. As a result, the PowerShares DB Agriculture Fund, an exchange-traded fund tracking grain and sugar, has risen 17 percent so far this year. And certain seed and fertilizer manufacturers--such as Mosaic, up 6 percent this year--have become ports of relative stability in an otherwise harrowing year for investors.

Still, the increasingly gloomy economic outlook has stirred concern that the grain run might lose its steam. (After all, a slowing economy can lead to lower commodity prices, if only by cooling speculative fervor.) But there are two key reasons that grain prices are unlikely to decline sharply anytime soon. First, while the U.S. economy is expected to slow dramatically over the next couple of quarters--perhaps even tipping into an outright recession--the International Monetary Fund expects global economic growth to chug along at a healthy 4.1 percent clip in 2008. Sure, that's down from last year's 4.9 percent, but it's pretty darn peppy nonetheless.

What's more, the recent surge in agricultural commodity prices has been driven by not one but a host of forces that should remain strong--if not accelerate--despite the short-term economic ups and downs. "The maintaining of historically high [agricultural commodity] prices is most likely here for at least a few years," says Randy Mittelstaedt, the director of research at R. J. O'Brien, a commodities and futures brokerage.

**Alternative fuels.** Emerging demand for alternative fuels such as ethanol, which is usually made from corn, has been a key factor in surging commodity prices. The federal government has relied on incentives to boost ethanol use since the late 1970s. But the renewable-fuels standard of the Energy Policy Act of 2005--which mandated increasing levels of ethanol use--helped trigger a more recent spike in demand. As a result, corn prices more than doubled from December 2005 to December 2007. "Ethanol has been a huge driver of higher corn prices," says Daniel Griswold of the Cato Institute.

**Increased demand for biodiesel, which is usually made from soybeans, has put upward pressure on soybean prices as well. This momentum only intensified as farmers, looking to cash in on ethanol demand, began planting corn on land previously used for soybeans. That led to lower production, driving soybean prices sharply higher. "You've got soybeans and corn bidding for the same acreage out in the Midwest," says Jerry Norton of the U.S. Department of Agriculture. "That's certainly driving up the prices."**

Demand for alternative fuels is expected to continue gathering steam, especially in light of federal legislation that compels fuel producers to use no less than 36 billion gallons of biofuel in 2022--roughly five times as much as is used today.

**More meat.** The growing middle classes in fast-developing countries like China and India have been able to afford to raise their protein intake by eating more meat. As a result, more grains are needed for livestock feed. "Literally 2 billion people are going from a grain-based society to a meat-based society," says Ryan Davies, a senior trader at Titan Commodities. Total meat consumption in developing countries nearly tripled from 1980 to 2002. This trend should continue to influence agricultural commodity prices in the future, with the United Nations anticipating global meat production to more than double from 2001 to 2050--that's roughly twice the projected rate of world population growth for that period.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST); International effort takes critical steps to accelerate growth of global biofuels market Law & Health Weekly February 23, 2008

**New investors.** Investors began warming to agricultural commodities in 2001 as a hedge against inflation, says Darin Newsom, a senior analyst at DTN. But as prices marched upward, a growing number of big-ticket investors--such as hedge funds--began shooting for capital appreciation, pulling even more money into the market. "We've seen the agricultural commodities market evolve ... into a recognized investment strategy," Newsom says.

**Dollar and weather.** A weaker U.S. dollar also lifted commodity prices in 2007 by making crops cheaper for foreign buyers. Mother Nature played a role as well, as an Australian drought helped push wheat prices higher.

So, recession or not, don't expect most agricultural commodities to come back to Earth in the near future, as global demand for grains remains strong and new federal policy measures mandate more biofuel use. Newsom says corn futures could increase by as much as 25 percent in 2008, and soybean prices could go up by slightly more than that. Wheat remains the wild card. If farmers can move past the weather-related problems that hobbled production in 2007, wheat prices could pull back, he adds.

But while individual crop prices may stray from projections, R. J. O'Brien's Mittelstaedt is convinced that historically high agricultural commodity prices are here for the next few years at least. That's unless, of course, Americans stop driving cars and developing countries suddenly go vegan.

#### Hot Commodities

Commodity prices have soared over the past two years.

#### DOLLARS PER BUSHEL

\$12

9

6

3

0

Soybeans

Wheat

Corn

\$5.72

\$3.48

\$2.36

\$13.26

\$10.48

\$5.04

3/31/06

3/30/07

1/31/08

2/11/08

Source: Chicago Board of Trade

**LOAD-DATE:** February 15, 2008

Law &amp; Health Weekly

February 23, 2008

## NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST);

### International effort takes critical steps to accelerate growth of global biofuels market

**SECTION: EXPANDED REPORTING; Pg. 765**

The governments of the United States, Brazil and the European Union (EU) -the world 's major producers of biofuels -released an analysis of current biofuel specifications with the goal of facilitating expanded trade of these renewable energy sources. Spurred by increased market demands, this report was solicited by the U.S. and Brazilian governments and the European Commission (EC) on behalf of the EU, with the work conducted by an international group of fuel standards experts (see also National Institute of Standards and Technology (NIST)).

Biofuels -derived from biological materials such as plants, plant oils, animal fat and microbial byproducts -are gaining popularity worldwide as both energy producers and users seek ways to reduce greenhouse gas emissions, move away from dependence on fossil fuels and invigorate economies through increased use of agricultural products. As a result, biofuels are becoming an increasingly important commodity in the global marketplace.

One potential obstacle to achieving greater efficiency in the global biofuels market is confusion over differing -and sometimes conflicting -standards for characterizing the make-up and properties of biofuels. To clarify the current situation and identify potential roadblocks to improved compatibility, the U.S. and Brazilian governments and the EC convened a task force of experts from standards developing organizations (SDOs) to compare critical specifications in existing standards used globally (factors such as content, physical characteristics and contaminant levels that govern a fuel 's quality) for pure bioethanol and **biodiesel**, two key biofuels. The White Paper published identifies where key specifications in the standards are:

similar (and can be considered compatible); different, but could be reconciled in a short period; or irreconcilably different as they stand.

The "White Paper on Internationally Compatible Biofuels Standards" was requested by the governments of the United States and Brazil and the EC, and was produced by the joint task force after a six-month review process that considered thousands of pages of technical documents produced by ASTM International, the Brazilian Technical Standards Association (Associação Brasileira de Normas Técnicas or ABNT) and the European Committee for Standardization (Comité Européen de Normalisation or CEN). Standards developed by these three SDOs are currently being used in support of biofuels commodities trading between nations.

The experts found that these three sets of bioethanol and **biodiesel** standards, and the specifications they contain, share much common ground and, therefore, impose few impediments to biofuel trade. Nine of the 16 ethanol specifications reviewed, the task force states, are "in alignment" and all but one of the remaining specifications could be aligned in the short term. For **biodiesel**, the report lists six specifications as compatible. It suggests that many of the remaining differences could be handled by blending various types of **biodiesel** to create an end product that meets regional specifications for fuel quality and emissions.

In formal transmittal letters to representatives of the standards community, the U.S. and Brazilian governments and the EC on behalf of the EU applauded the efforts of the technical experts and encouraged the SDOs to consider the results of those efforts.

Recognizing that many of the issues relating to variations in specifications can be traced to different measurement procedures and methods, two leading metrology institutes -the U.S. National Institute of Standards and Technology (NIST) and Brazil 's National Institute of Metrology, Standardization and Industrial Quality (Instituto Nacional de Metrologia, Normalização e Qualidade Industrial or INMETRO) -are collaborating on the development of joint measure-

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST); International effort takes critical steps to accelerate growth of global biofuels market Law & Health Weekly February 23, 2008

ment standards for bioethanol and **biodiesel** to complement the efforts of the SDOs. Initial efforts focus on creating certified reference materials to support development and testing of bioethanol and **biodiesel**, and analytical measurement methods for source identification (to determine if a fuel comes from a renewable or non-renewable source and the source of origin of **biodiesel**, e.g., soy, palm oil, animal fat, etc.) by the end of 2008.

The United States, Brazil and the EU are all members of the International Biofuels Forum (IBF) and will continue to engage other IBF governments in future work. The named SDOs will also seek to involve their counterparts in the other IBF member countries -China, India and South Africa -in the effort to make biofuels standards compatible worldwide.

Brazil, the world's biggest exporter of ethanol, already requires up to a 25 percent blend of ethanol with all gasoline that is sold. The EU has established a bioethanol blend mandate for its member states of 5.75 percent by 2010, and at least 10 percent of all vehicle fuels by 2020. In the United States, the Energy Policy Act of 2005 sets a 7.5 billion gallon goal for national biofuel consumption (usually ethanol) by 2012.

Keywords: National Institute of Standards and Technology (NIST).

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**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newsletter

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## BusinessWorld

February 18, 2008 Monday

### Industrial uses of jatropha explored

**BYLINE:** Maria Kristina C. Conti**SECTION:** Pg. S1/2

Jatropha oil may be used as industrial fuel while its viability as automotive fuel is still being determined, said the Asian Institute of Petroleum Studies, Inc., or AIPSI.

AIPSI Managing Director Rafael S. Diaz, Jr. said jatropha seeds and oil have strong potential for use as industrial fuel, both for bunker and coal-fired power generators, instead of for **biodiesel**.

Jatropha has immediate industrial application as heating fuel, since the seed itself has a heat value almost similar to that of bituminous coal. In addition, it is sulfur free and will provide oxygen to the coal blend for cleaner burn, Mr. Diaz said in a statement over the weekend. Oil extracted from the seed may be used to blend in bunker fuel for use in boilers or furnaces or even in large low-speed diesel engines which are not discriminating in quality.

Jatropha oil may also be used for lighting and cooking in lieu of firewood, kerosene, or liquefied petroleum gas, which are either scarce or unaffordable resource for people in the countryside. It can also be used in small close-system generators designed to be fueled by organic materials, and thus promote rural electrification, said Mr. Diaz.

"The industrial application of jatropha will provide immediate market for those that have started to plant jatropha. It is also the most practical way to get the jatropha initiative started in the meantime that jatropha **biodiesel** [or more precisely, jatropha methyl ester] development is still being undertaken," Mr. Diaz said.

However, he warned that burning jatropha seed or oil might produce toxic emissions. Jatropha has a poisonous element, called curcin, which can cause death when ingested. It must be determined if curcin will develop toxic emission when combusted in the engine, he said.

Without positive results from a major technical study on **biodiesel**, jatropha will not be accepted by car makers nor by major oil companies for use and distribution to the automotive industry, Mr. Diaz said.

Such low levels mean their oxidation stability - a measure of shelf life - is less than the standard six hours for fossil diesel. Coconut-based **biodiesel**, meanwhile, stays rancid-free for 16 hours.

Scientific tests are already ongoing, reported the government's main jatropha promoter, the Philippine National Oil Co.-Alternative Fuels Corp. (PNOC-AFC). In a phone interview yesterday, PNOC-AFC General Manager Clovis T. Tupas said the agency is already conducting stationary engine tests with the Science department.

"We are okay with jatropha oil used for industrial purposes, but we are really aiming to make jatropha oil available as automotive fuel. [The industry] has more stringent standards, and we want to meet them," he said.

PNOC-AFC is building a pilot plant in Bataan, which is expected to produce the country's first commercial quantities of JME by next year. "By end-March we will have expellers, or machines used to extract oil. We will have a mini-refinery and assorted facilities. The farmers only need to go there with their seeds," Mr. Tupas said.

Jatropha grows fast in poor soil conditions with little or no maintenance at all. One hectare grown to jatropha could yield 3.5-5 tons of seeds. Initial studies show 3-4 kilos of jatropha seeds could yield about one liter of crude or unprocessed oil readily used by run low-rpm diesel engines like hand tractors, water pumps, and threshers. The Science department has confirmed the seeds have a 28.60% oil content.

**LOAD-DATE:** February 17, 2008

**LANGUAGE:** ENGLISH



February 18, 2008 Monday

## Amyris plans Emeryville plant to test biofuels

**BYLINE:** Mavis Scanlon

Amyris Biotechnologies Inc. plans to build a biofuels pilot plant in an industrial warehouse building near its Emeryville headquarters so it can continue work on scaling its synthetic biofuel production process to larger commercial volumes. Amyris applied to build the plant at 1355 59th St., minutes away from its Horton Street headquarters.

Backed with \$90 million in venture capital funding, four-year-old Amyris is looking to tap the potential energy found in plants to develop a reliable transportation fuel substitute that provides more energy than ethanol and cuts greenhouse gas emissions.

Its target is to get its fuels to market by 2010. Once its processes are perfected - a key goal of the pilot plant is to scale its fuel products at the lowest possible cost - Amyris wants to partner with other companies or license its technology to producers able to ramp up to initial commercial production levels of about 132,000 gallons per batch.

Most biofuel produced today is ethanol made from corn and **biodiesel** made mostly from soybean oil. Ethanol production in 2005 topped 4 billion gallons, according to the U.S. Department of Energy, while **biodiesel** production hit 75 million gallons, triple the amount compared with 2004.

Amyris was founded to develop an anti-malarial drug. It used technological breakthroughs in the field of synthetic biology to develop its own technologies for producing compounds by genetically engineering microorganisms. The company's founders quickly realized their technology could be used to develop other drugs or nutritional supplements - or synthetic hydrocarbons.

"None of them (the other compounds) were as interesting as these fuel molecules," Neil Renninger, senior vice president, development, and an Amyris co-founder, said in an October interview.

John Melo, the company's CEO and a veteran of British oil giant BP PLC, has described Amyris' founders and staff as "mission-driven," and wanting to make a difference, and its cleaner-burning low-emission bio-gasoline, **biodiesel** and bio-jet fuel fall into that category. All of the fuels the company is developing can be blended into conventional fuels at blends up to 50 percent or 60 percent.

But Amyris' efforts to date have been in the lab. The company has not disclosed the cost of the plant, and did not make any executives available to comment for this story.

The plant, to be staffed by 10 to 14 employees, will produce only about 10 to 25 gallons a week.

Still, because there will be limited quantities of flammable and other hazardous materials stored at the site, and potential issues with noise, the city found the project would not be exempt from the California Environmental Quality Act. "When we looked at it more closely we had a bunch more questions," said Charles Bryant, the city's planning and building director. The city has hired an environmental services firm to conduct an initial study. That study will be presented to the Planning Commission on March 24.

"To exempt a project from CEQA (we) would have to be absolutely certain it won't have any impact," said Diana Keena, an associate planner with Emeryville's Planning and Building Department. Keena said she expects the city will issue a negative declaration after the initial study, which means a full Environmental Impact Report is unnecessary.

"We don't foresee this changing any of our plans," Annika Jensen, Amyris senior manager of corporate and marketing communications, said in an e-mail.

Although the chances the city would have to do a full EIR are low, if it does make that determination, it would be a blow to Amyris, because that process could take as long as a year.

Amyris Biotechnologies Inc.

Business: Biofuels, anti-malarial drug Headquarters: Emeryville Founded: 2004 CEO: John Melo Address: 5980 Horton St. 94608 Phone: 510-450-0761 Web: [www.amyris.com](http://www.amyris.com)

**LOAD-DATE:** February 18, 2008

Health &amp; Medicine Week

February 18, 2008

**LIFE SCIENCES;****Study data from University of Michigan, Department of Mechanical Engineering provide new insights into life sciences****SECTION: EXPANDED REPORTING; Pg. 3160**

A report, 'Thermal decomposition of methyl butanoate: ab initio study of a **biodiesel** fuel surrogate,' is newly published data in *The Journal of Organic Chemistry* (see also Life Sciences). According to a study from the United States, "In this paper, we report a detailed analysis of the breakdown kinetic mechanism for methyl butanoate (MB) using theoretical approaches. Electronic structures and structure-related molecular properties of reactants, intermediates, products, and transition states were explored at the BH & HLYP/cc-pVTZ level of theory."

"Rate constants for the unimolecular and bimolecular reactions in the temperature range of 300-2500 K were calculated using Rice-Ramsperger-Kassel-Marcus and transition state theories, respectively. Thirteen pathways were identified leading to the formation of small compounds such as CH(3), C(2)H(3), CO, CO(2), and H(2)CO. For the initial formation of MB radicals, H, CH(3), and OH were considered as reactive radicals participating in hydrogen abstraction reactions. Kinetic simulation results for a high temperature pyrolysis environment show that MB radicals are mainly produced through hydrogen abstraction reactions by H atoms. In addition, the C(O)OCH(3)=CO + CH(3)O reaction is found to be the main source of CO formation," wrote L.K. Huynh and colleagues, University of Michigan, Department of Mechanical Engineering.

The researchers concluded: "The newly computed kinetic sub-model for MB breakdown is recommended as a core component to study the combustion of oxygenated species."

Huynh and colleagues published their study in the *Journal of Organic Chemistry* (Thermal decomposition of methyl butanoate: ab initio study of a **biodiesel** fuel surrogate. *Journal of Organic Chemistry*, 2008;73(1):94-101).

For more information, contact L.K. Huynh, The University of Michigan, Dept. of Mechanical Engineering, Ann Arbor, Michigan 48109-2125 USA..

Publisher contact information for the *Journal of Organic Chemistry* is: American Chemical Society, 1155 16th St., NW, Washington, DC 20036, USA.

Keywords: United States, Ann Arbor, Life Sciences.

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## USA TODAY

February 18, 2008 Monday  
FINAL EDITION

## Fears of climate change spark action in N.H.

**BYLINE:** Judy Keen

**SECTION:** NEWS; Pg. 6A

Warmer weather's potential effect on economy prompts city to boost efforts at conservation

KEENE, N.H. -- This city is preparing for the worst.

Climate change is inevitable, not theoretical, many city leaders here agree. They're trying to anticipate how higher temperatures, less snow and more rain will affect every aspect of life here -- and what changes they must make to protect the city, its 23,000 residents and its 6,000 college students.

The possibilities are daunting: Where will residents work if the sugar maple, skiing and tourism industries disappear because of warmer weather? What if increasingly intense spring and fall storms overwhelm the city's culverts and wastewater treatment plant? What if hotter days fuel the growth of algae that harms water quality? What if roofs collapse under the weight of heavy snow and ice? What if severe weather cuts off transportation routes?

"The sky may not be falling today, but the signs are all around us that these kinds of things can happen," City Manager John MacLean says. "We have to plan for them."

The harbingers of climate change trouble residents of this picturesque city in a glacial lakebed that's surrounded by ridges and was settled in 1735. Its vivid autumn leaves, pumpkin festival, skiing and snowboarding are a source of pride and attract tourists.

Already, though, some sugar maples are dying as the climate grows warmer. A catastrophic flood in 2005 was followed by a series of spring and fall storms that some here worry marks a permanent shift in weather patterns.

Those changes conjure images of an ominous future for Mikaela Engert, a city planner here. "If we lose our maples, part of our cultural identification and heritage would be missing," she says. "Maybe we won't have as much of a winter; that could have an impact on our economy. We could see smog. It could be a hotter, drier environment and wetter at certain times of the year."

A template for other cities?

**For years, Keene has tried to prevent that from happening by reducing emissions and conserving energy. Firetrucks, snowplows and other city vehicles run on biodiesel fuel. Methane gas at the municipal landfill is converted into electricity. Streetlights use energy-efficient LED bulbs. Three traffic roundabouts keep vehicles moving, minimizing emissions from idling cars.**

In 2006, Keene was recruited by Local Governments for Sustainability, an international association, to be a test case for what's being called adaptation planning: anticipating the ways climate change could affect every facet of a community and shifting government resources now to prepare. Keene's experience, the group hopes, will serve as a template for other cities. A committee of city officials and representatives from Antioch University New England and Keene State College tackled that long list of "what-ifs."

The committee decided to focus on the issues city government deals with every day, says Chairman Jim Duffy, a member of the City Council. "We identified any function of the city -- from emergency response to building codes to ordinances -- that would be affected," he says. The panel brainstormed what might happen, what the city could do and came up with goals and target dates for meeting them.

"We were forced to connect the dots," Duffy says. "Climate change isn't just about the natural environment; it affects everything we do."

Jaycee Clark, co-owner of Norm's Ski & Bike Shop, which sells skiing and snowboarding gear, has already noticed changes in the winters. Snow used to arrive earlier, he says, and there was more of it. He supports the city's focus on preparedness. "It's time to think about it -- before it's too late," he says.

Cost is a concern

In a November report the committee proposed dozens of goals, big and small: changing design standards to encourage more pitched roofs; identifying alternate transportation routes; building bigger culverts; increasing water storage capacity in case of drought; developing a food security plan; providing public education about disease protection.

The next steps are to start thinking about ways to pay for the changes in a city with a \$51 million budget and keep the momentum going, Mayor Dale Pregent says.

"You can't just say, 'Let's do these 10 things now and it's going to cost \$10 million,'" he says. "You have to do it as cheaply as possible so you don't have a big tax impact, because you'll scare people and they won't want to do it."

Instead, says former mayor Mike Blastos, adapting to climate change has to be the foundation of every decision. "You incorporate into planning and keep it in the forefront of everything you do," he says. A proposed ordinance that would regulate new construction on hillsides to limit damage from runoff from wetter weather will be an early test of the city's commitment to change.

Kay Delanoy, a retiree who was on the committee, sees no choice but to start preparing. "We know what's coming," she says. "It just makes common sense to plan for it, and towns that don't plan are going to be in a bad way."

Duffy, though, worries about sustaining that sense of urgency. "It would be great if global warming had the face of Osama bin Laden," he says, "but it's this abstract, overwhelming thing and you don't see the impacts that clearly yet."

\*States preparing for climate change, 1A

**LOAD-DATE:** February 18, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** NEWSPAPER

**The Associated Press State & Local Wire**

February 17, 2008 Sunday 3:28 PM GMT

**Peco using local soybeans, diesel to power truck fleet**

**SECTION:** STATE AND REGIONAL

**DATELINE:** PHILADELPHIA

One of Philadelphia's largest utility companies is going green at least with its truck fleet.

Peco, the region's electricity provider, says its fleet of 580 utility trucks now run on a **biodiesel** fuel blend.

The company says the switch will reduce carbon dioxide and other emissions.

The blend consists of 20 percent soy-based oil and 80 percent diesel fuel. And the soybeans are locally grown.

Emily Landsburg of The Energy Cooperative says an increasing number of large companies are going green. In Chester County, several school districts run their buses on **biodiesel** fuel.

PECO's fleet uses about 15,000 gallons of fuel a week, at a cost of more than \$5 million a year.

Information from: Daily Local News, <http://www.dailylocal.com>

**LOAD-DATE:** February 18, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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**The Fayette Observer (Fayetteville, North Carolina)**

Distributed by McClatchy-Tribune Business News

February 17, 2008 Sunday

**EDITORIAL: Biofuel bust?: New studies may move energy research in different directions****BYLINE:** The Fayetteville Observer, N.C.**SECTION:** COMMENTARY

Feb. 17--Congressman Bob Etheridge, the Harnett County Democrat, carries a tiny bottle in his pocket. It's a vial of biofuel. He often takes it out, passes it around, lets people look at it, smell it. He calls it the wave of the future, an opportunity to turn North Carolina into "the Saudi Arabia of the United States."

It was a great notion, shared by many other members of Congress representing agricultural areas. Shared, too, by farmers, "green" entrepreneurs, even by oil companies, which know world petroleum reserves have dropped below the halfway point and new fuels must be developed.

All of them got a shock last week, when the journal *Science* published several peer-reviewed studies of the impact of biofuels. It turns out that ethanol and **biodiesel** have a big problem -- when burned, they produce way more carbon dioxide than conventional fuels, probably twice as much. One study says corn-based ethanol fuel could double greenhouse gases in 30 years.

Worse, expanding the space for growing biofuel raw materials also worsens global warming because it requires clearing more land, thus removing mature plants and trees that absorb carbon dioxide. In short, if we want to accelerate global warming, biofuels are the way to do it.

It was one more piece of evidence to convince us that biofuels -- especially those using food crops, like corn and soybeans -- aren't the way to a greener world, or to energy independence. This follows several years of sharply rising prices for corn, the primary ingredient for ethanol -- which in turn brought higher prices for every product produced from, or fed with, corn.

It may be time to put big money in places other than cornfields. Producing more electricity is certainly essential, and it can be done without fossil fuels. The country is moving back into construction of nuclear power plants, an acceptable interim step. Modern nuclear plants are reliable and safe. Recent federal reports show "wind farms" are now cost-competitive with coal plants for construction, and far cheaper to operate -- the fuel, after all, is free, and nonpolluting.

Researchers are also making progress increasing the efficiency and cutting the costs of solar electric generation. And the tantalizing hydrogen fuel cells may come our way someday to power our cars and homes.

The state and country need to pursue alternatives to petroleum and biofuels, and put serious research into developing them. Perhaps the next time we see him, Congressman Etheridge will have a vial of hydrogen to show us.

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**LOAD-DATE:** February 17, 2008**LANGUAGE:** ENGLISH

The News Tribune (Tacoma, Washington)  
Distributed by McClatchy-Tribune Business News

February 17, 2008 Sunday

## Green garbage pickup? It's better than it sounds

**BYLINE:** Brent Champaco, The News Tribune, Tacoma, Wash.

**SECTION:** STATE AND REGIONAL NEWS

Feb. 17--From energy-efficient light bulbs to houses using solar power, more people are "going green" these days.

Garbage companies are not about to be left behind.

The latest entrant is University Place Refuse, which last week began using cleaner-burning **biodiesel** in its entire fleet of trucks that fill up with regular diesel. The switch is just the start, said general manager Roger Gruener. The company initially is using a mixture of 5 percent soybean **biodiesel** and 95 percent regular diesel. UP Refuse fills all 26 of the garbage, recycling and yard-waste trucks it runs every day with this mix.

Eventually, UP Refuse would like to move to a blend with 20 percent **biodiesel**, he said.

"The nature of our business is recycling, so going green made sense," Gruener said.

The company's management considered the switch for a couple of years, but it wasn't sold on the reliability of **biodiesel** and its high price compared to the regular stuff.

But Gruener said quality has improved and prices now are only about 6 cents more per gallon than regular diesel. He said the change won't affect the curbside pickup rate for customers.

UP Refuse -- which also serves Fircrest -- is part of a wave of municipalities and their contractors shifting to eco-friendly practices.

--In December, Federal Way announced it would spend about \$50,000 to buy five hybrid vehicles.

--Pierce Transit's entire fleet of buses runs on compressed natural gas, which reduces emissions by 90 percent compared to regular diesel, according to the agency's Web site.

--The City of Tacoma has filled its garbage trucks with **biodiesel** for six years.

Floyd Wilson, manager of Tacoma's fleet, said all 65 garbage trucks are filled with a B20 mix -- a blend of 20 percent **biodiesel** and 80 percent petroleum diesel.

In the summer months -- when there's less chance of **biodiesel** gelling or not functioning properly due to cold temperatures -- the city sometimes uses a blend of about half **biodiesel**, he said.

Wilson added that the cleaner diesel has never caused mechanical problems or failures on Tacoma's trucks.

"I'd like to see us go 100 percent **biodiesel** if we could, but that's probably not going to happen," he said.

Harold LeMay Enterprises, one of three companies licensed by the state to collect garbage in Pierce County, doesn't use **biodiesel**. But the company is looking at buying a pair of trucks this year that run on natural gas.

Doug LeMay, the vice president who oversees the fleet, says it has an even grander vision for helping the environment: Using methane fumes from its landfill in Graham and converting them to either liquid or compressed gas.

The plan would not only be good for the environment, but also would supply LeMay garbage trucks with more than enough fuel, he said. The plan is only conceptual, LeMay said.

Green garbage pickup? It's better than it sounds The News Tribune (Tacoma, Washington) February 17, 2008 Sunday

Environmental groups and others have long noted how diesel garbage trucks add to environmental problems. They spew more pollution than other large vehicles because they're often older, less fuel-efficient and make frequent stops and starts in compact residential neighborhoods.

Converting sanitation trucks nationwide to alternative fuels would have a greater effect on air quality than converting all mass transit buses, said a 2003 report by Inform Inc., a national environmental research organization.

UP Refuse's switch to B5 **biodiesel** might seem like a small hop compared to the leaps Tacoma and others have taken. Gruener acknowledges he's not one to invest thousands of dollars into something that won't return a decent profit.

But the choice was easy with **biodiesel**. He says the switch could prompt the company to study other ways to lessen its environmental impact.

"This is probably more of a kickoff to look at everything we do," Gruener said.

Brent Champaco: 253-597-8653

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**LOAD-DATE:** February 17, 2008

**LANGUAGE:** ENGLISH

**ACC-NO:** 20080217-TC-Green-garbage-pickup-It-s-better-than-it-sounds-0217

**PUBLICATION-TYPE:** Newspaper

**JOURNAL-CODE:** TC

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Rocky Mountain News (Denver, CO)

February 16, 2008 Saturday  
Final Edition

## Incubator for progress CSU hatches spinoffs to tackle global issues with business plan

**BYLINE:** Gargi Chakrabarty, Rocky Mountain News

**SECTION:** BUSINESS; Pg. 1WALL\_ST\_WEST

Slimy bluish-green algae floats in the frothing water tank, clinging to the sides. The idea is that the scum could satiate the world's growing energy hunger.

Solix Biofuels plans to squeeze oil out of the protein-rich algae and sell it as **biodiesel**, a motor fuel.

The company is just one of several Colorado State University spinoffs that seek to solve some pressing global issue, such as energy demand or air pollution, by transferring research work to the marketplace.

"Education is the primary driver of economic prosperity," said CSU President Larry Edward Penley, often credited with turning around the philosophy of the university since he came on board in August 2003.

"A university like Colorado State can and should be organized to promote higher quality of life, and the product of scientific and engineering research must be made commercial if it has to matter to society."

It's an odd place for CSU, which isn't exactly on the radar of venture capitalists or angel investors as an incubator. Plus, there's competition from the Stanfords and Berkeleys of the world, and the perception of a learning institution focused on commercial success.

"The biggest pitfall is that a university with incubator concept, in some way or another, is accountable to the business community that oftentimes has an agenda different than education," said Stephen Haag, associate professor at the University of Denver's Daniels College of Business.

"I don't know of any school that has fallen into that trap, but that's certainly possible."

But CSU has a different game plan, professor Brian Wilson said.

"It's about the social return on investment, not the capital return," said Wilson, a co-founder of several CSU spinoffs.

Penley - a former business dean at Arizona State - and supporters at CSU have worked hard to realize the vision.

Former CSU Provost Tony Frank led a team in summer 2004 to study how technology transfer works at universities in Wisconsin, Illinois and California, especially at Stanford in Palo Alto and at Caltech in Pasadena. Stanford's famous spinoff is Google Inc. of Mountain View, Calif., the search engine giant started by two students in a garage.

That CSU's board of governors is largely composed of Denver business leaders further shaped the vision.

Board members include Doug Jones, former chairman of the Denver Metro Chamber of Commerce; Joe Blake, the chamber's CEO; Patrick Grant, CEO of the National Western Stock Show; and Marguerite Salazar, CEO of Valley-Wide Health Systems.

Solix Biofuels was born last year.

It was joined by AVA Solar, which owns a patented technology that could slash the cost of solar panels. Envirofit International, another CSU spinoff, is making inroads in Asian and African markets.

Incubator for progress CSU hatches spinoffs to tackle global issues with business plan Rocky Mountain News (Denver, CO) February 16, 2008 Saturday

The university spawned two so-called superclusters to speed up research into infectious diseases and cancer by putting students, professors and investors together to brainstorm commercial plans. A new supercluster to promote clean energy will be announced this spring.

Also, CSU traded land with Fort Collins to build an incubator park and spent nearly \$300 million last year on research.

The challenge is to keep up the momentum and lure venture capitalists, angel investors, entrepreneurs and eventually Wall Street into convergence on the Fort Collins campus.

"We don't have an existing large cluster of industry in the area. We are not like Boston or Silicon Valley yet," said Mark Wdowik, CEO of nonprofit CSU Ventures, which manages the business side of superclusters.

"But in the long term, we can attract money and create Route 128 here. Maybe it'll be Interstate 25 without the sinkhole."

#### INFOBOX 1

Nonprofit Envirofit's goal: 'Develop and disseminate solutions on a big scale'

An auto rickshaw in the Philippines emits 90 percent less pollution.

A three-wheel tempo in Nepal is 35 percent more fuel-efficient.

A cookstove in sub-Saharan Africa makes more heat and belches less smoke.

Envirofit International makes these products to clean up indoor and outdoor air pollution in poorer nations.

The company, at a defunct coal-fired power plant in Fort Collins, has offices in the Philippines and Bangalore, India, and is about to open one in Africa.

Like AVA Solar, Envirofit is a CSU spinoff. Unlike the solar company, it is a nonprofit whose customers are poverty-stricken people of developing nations.

"The challenges of selling to the bottom of the pyramid is that venture capitalists won't get a return on investment; they will get a social return," said Bryan Wilson, a veteran professor of mechanical engineering.

Wilson founded the company in 2003 with Paul Hudnut, a former business professor; and students Tim Bauer and Nathan Lorenz.

The prior year, the team had begun looking into two-stroke engines when snowmobiles were polluting Yellowstone National Park. Soon, they developed one of the cleanest snowmobiles.

They took the research results to Third World nations, demonstrating that a \$300 kit fitted onto two-stroke engines common on auto rickshaws could drastically cut emissions and improve mileage.

Envirofit now has a thriving business in the Philippines, and the Environmental Protection Agency has asked it to work on a kit for India.

Envirofit also is developing a line of clean stoves. Nearly half the world cooks with wood, dung or crop waste, and lethal flames or indoor pollution are leading causes of death among children and women.

Last year, Envirofit received \$25 million from the Shell Foundation to design and develop 10 million clean stoves.

"Envirofit is an example of how universities can develop and disseminate solutions on a big scale," Wilson added.

Solix Biofuels grows algae to make oil

Corn is passe. Switchgrass is years away.

So, how about algae?

The green slimy feedstock is being touted as a stable and affordable source of motor fuel, and leading that bandwagon is Solix Biofuels.

Solix was born of CSU's biofuels research, drawing heavily from two decades of work done at the National Renewable Energy Laboratory in Golden.

Incubator for progress CSU hatches spinoffs to tackle global issues with business plan Rocky Mountain News (Denver, CO) February 16, 2008 Saturday

The technology depends on a type of algae that produces oil. The algae is cultured in plastic bags, which allows enough light for the organisms to grow but reduces infestation by other species.

The company is collaborating with Fat Tire beer maker Belgium Brewing Co. to pipe carbon dioxide from its nearby brewery into plastic bags to nourish the algae. The brewery produces 5,000 metric tons of CO<sub>2</sub> a year.

Once the algae is harvested, it's crushed into a type of vegetable oil. The oil later is refined into **biodiesel**, a fuel mostly blended with diesel and sold at gas stations. The algae oil also can be refined into ethanol and jet fuel.

Co-founder Bryan Wilson, a mechanical engineering professor, said the algae is well-suited for dry Western states dotted with small bodies of water, or in land adjacent to power plants where waste heat is available.

Algae-based **biodiesel** could meet the diesel demand by using only 0.5 percent of the nation's land, supporters say.

"Our goal is to produce 8,000 gallons of **biodiesel** per year from growing algae in one acre of land," Wilson said.

Business plan brought AVA Solar to life, with prospect of meeting high demand with low-cost panels

W.S. Sampath figured he could make solar energy panels for \$1 a watt if he applied the beer-can logic.

That was 1987, and Sampath, then a rookie professor of engineering at CSU, was studying aluminum use at beer maker Anheuser-Busch's plant in Fort Collins.

Sampath imagined that if, like the can plant, he used low-cost labor, cheaper material and an efficient process, he could make solar panels at one-third the cost of competing technologies.

Over two decades, he translated his theory into reality, using cadmium telluride, which is commonly found in copper-zinc mines, to make panels. But there was one hitch.

Nobody outside CSU had heard of Sampath's success.

That changed on the morning of Nov. 1, 2006, when Hunt Lambert walked into Sampath's lab.

Lambert had been appointed by CSU President Larry Edward Penley to push technology transfer. He seemed impressed with the research work, then turned around and asked, "Where's your business plan?"

"I didn't know what he meant," Sampath, 51, recalled.

AVA Solar was born soon after Lambert's visit, on Jan. 1, 2007. Newly hired CEO Pascal Noronha, Sampath, and former students Kurt Barth and Al Enzenroth, set about charting the company's path.

"We'd want to be the Google of clean energy," Sampath said. "That'd be a vision, yes."

AVA Solar plans to break ground this year on a manufacturing plant to produce 2 million solar panels, each producing 60 watts of electricity, beginning in 2009. It will employ up to 500 workers. AVA Solar pocketed \$3 million in federal research grants last year to perfect its panel design.

"The nice thing about the solar market is that there's an over-demand situation, and supply is racing to catch up," said Russ Kanjorski, AVA's director of strategic planning.

"We could scale up the plant to meet market conditions."

AVA Solar Inc.

CEO: Pascal Noronha

Founded: 2007

Employees: 40

What it does: Makes thin-film photovoltaic panels capable of producing solar electricity at less than one-third the cost of competing solar technologies

Key advantages for global success: It employs easily available raw materials and a manufacturing process capable of scaling to keep up with the growing market expected to touch \$60 billion by 2012.

Envirofit International

Incubator for progress CSU hatches spinoffs to tackle global issues with business plan Rocky Mountain News (Denver, CO) February 16, 2008 Saturday

CEO: Ron Bills

Founded: 2003

Employees: Nine domestic, seven international

CSU students: 10 graduate students, six undergraduates

What it does: Researches and sells products that reduce indoor and outdoor air pollution at lower cost, such as clean cooking stoves or fuel-efficient auto rickshaws commonly used in developing nations

Key advantages for global success: Its products are affordable and inspirational for developing nations and could be embraced by a vast number of customers.

Solix Biofuels

CEO: Doug Henston

Founded: 2007

Employees: Roughly 30 but changing weekly

CSU students: three graduate students, 15 undergraduates

What it does: Researches and commercializes **biodiesel** produced on a large scale from algae grown in ponds or brackish water

Key advantages for global success: Demand for biofuels has increased sharply with rising oil prices and concerns about climate change, and algae can produce more oil than soybeans.

INFOBOX 2

INFOBOX 3

INFOBOX 4

**LOAD-DATE:** February 16, 2008

**LANGUAGE:** ENGLISH

**NOTES:** chakrabarty@RockyMountainNews.com or 303-954-2976 SEE END OF TEXT FOR INFOBOX (4)

**GRAPHIC:** Photo (5), Brian Wilson is co-founder of several spinoffs at CSU. DENNIS SCHROEDER / THE ROCKY CAPTION: Herb Warren examines a solar panel cutout at AVA Solar in Fort Collins. The CSU spinoff hopes to meet high demand by cutting production costs. DENNIS SCHROEDER / THE ROCKY CAPTION: DENNIS SCHROEDER / THE ROCKY CAPTION: Brian Wilson holds an African cookstove. Envirofit is developing cleaner, safer stoves that burn hotter with less smoke. Flames and fumes are leading causes of death among children and women in developing nations. DENNIS SCHROEDER / THE ROCKY CAPTION: Blake Sherman, a research assistant for CSU spinoff Solix Biofuels, tends flasks of algae being tested for oil-conversion properties. Solix harvests the algae and crushes it into a type of vegetable oil that can be refined into **biodiesel**. CSU is shaping up as a supercluster school with several spinoffs that one day could become corporate giants. DENNIS SCHROEDER / THE ROCKY

**PUBLICATION-TYPE:** Newspaper

**The Associated Press State & Local Wire**

February 16, 2008 Saturday 5:01 AM GMT

## Beyond caffeine: UNR prof testing use of coffee grounds for fuel

**BYLINE:** By LENITA POWERS **SECTION:** STATE AND REGIONAL  
**DATELINE:** RENO Nev.

Coffee-lovers might one day help the environment whenever they buy those lattes and cappuccinos, thanks to a Reno professor's discovery of a new source for **biodiesel** fuel.

The epiphany came to Manoranjan Misra in a cold cup of coffee.

"One night, I had left a cup of coffee out, and the next morning, I saw this thin layer of oil around the edges," said Misra, a chemical and metallurgical professor at the University of Nevada, Reno.

He discovered the oil was triglyceride.

With the help of postdoctoral scholar Susanta K. Mohapatra and graduate student Narasimha Kondamudi, Misra developed a patent-pending process to extract the oil from spent coffee grounds to produce a high-quality **biodiesel** fuel.

The 59-year-old researcher said almost 3 million gallons of **biodiesel** could be produced annually from the more than 200 million pounds of coffee grounds that Starbucks alone generates each year in the United States.

The coffee grounds alternative fuel has a number of advantages over **biodiesel** produced from corn or soy, Misra said.

He said it will be cheaper, \$1.06 to \$1.33 a gallon, compared with corn and soy, at \$1.78 to \$2.90.

It's also more stable, giving it a longer "shelf life," he said.

After the triglyceride is extracted, the coffee grounds can be used a third time: compressed into pellets to heat homes with pellet-burning stoves.

And the coffee grounds-based fuel doesn't add to higher food costs and world hunger that using corn and soy does, Misra said.

"People making **biodiesel** out of corn and soy is a big issue because the prices for those things go up, and that has socioeconomic impacts," Misra said. "Our objective is to take waste material and make **biodiesel** fuel without taking the food from the plate."

Brazil has made **biodiesel** fuel from whole coffee beans, but Misra said his process is the first to use spent coffee grounds.

He said Nevada's mining industry, with its huge vehicles, would be a prime target for the cheaper fuel, which could be available within two years.

Jane Feldman, energy chair for the Toiyabe Chapter of the Sierra Club, said the coffee ground idea was worth exploring.

"But whenever you take municipal waste and convert it into energy, you have to ensure you aren't creating more toxins that are released into the atmosphere," Feldman said.

Misra doesn't believe that will be a problem. He said a laboratory test of the **biodiesel** fuel will be conducted soon and then tested in an engine at Bio Diesel Solutions Inc. in Sparks.

Right now, the only thing Misra said his new **biodiesel** fuel exudes into the air is the smell of stale coffee.

Beyond caffeine: UNR prof testing use of coffee grounds for fuel The Associated Press State & Local Wire February 16, 2008 Saturday 5:01 AM GMT

Tina Nappe, another Sierra Club member, questioned whether using coffee grounds would be cost-effective in Nevada or only in areas where coffee houses are close together so the grounds could be collected easily.

"The whole transportation issue would have to be worked out to make sure it's not an environmental trade-off," Nappe said. "It sounds like there's still some work to be done, but it is an intriguing idea."

A spokesman for Starbucks said the company doesn't have enough information about Misra's work to comment about whether it would provide grounds for his **biodiesel** fuel.

Starbucks began a "Grounds for Your Garden" recycling program in 1995, which provides residents with spent coffee grounds in recycled bags on a first-come, first-served basis.

On the Net: University of Nevada, Reno: <http://newsroom.unr.edu/>

Information from: Reno Gazette-Journal, <http://www.rgj.com>

**LOAD-DATE:** February 17, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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The Associated Press State & Local Wire

February 16, 2008 Saturday 8:13 PM GMT

## ND soybean plants illustrate state of **biodiesel** industry

**BYLINE:** By BLAKE NICHOLSON, Associated Press Writer

**SECTION:** STATE AND REGIONAL

**DATELINE:** BISMARCK N.D.

One oilseed crushing plant in eastern North Dakota is switching from soybeans to canola. Just a few miles away, farmers are banking on a bright future with beans, with plans for a crushing plant of their own.

The situation in the Red River Valley illustrates the paradoxical state of the nation's **biodiesel** industry, and the decisions facing crushers over whether to refine oil for food or fuel.

On one hand, only a quarter of the current production capacity is being used and the number of new plants coming on line has slowed dramatically. On the other, **biodiesel** sales volume continues to rise, and government mandates call for even more **biodiesel** use in coming years.

Northwood Mills LLC in Northwood is not giving up on refining vegetable oil, but it is drastically changing its focus. Instead of crushing soybeans for the **biodiesel** market, it will begin Monday to crush canola for the food market.

Part of the reason is a decline in the Canadian hog industry that has been a primary market for the plant's soybean meal, a byproduct used for animal feed. But general manager Clarence Leschied said the company also has soured on soybeans.

"The demand (for vegetable oil) from the **biodiesel** sector has just about disappeared, whereas canola going into the food market still has good demand," he said. "We've just seen the margins on soybeans deteriorating."

Leschied said other plants also might switch from the energy sector to the food sector. "U.S. **biodiesel** capacity is only running at about 25 percent," he said.

Amber Thurlo Pearson, a spokeswoman for the National **Biodiesel** Board, confirmed the percentage. She said **biodiesel** producers are going through "a rough patch" because of rising vegetable oil prices. But she believes many of the nation's 171 plants were built large accounting for much of the unused production capacity in anticipation of growth that is sure to come.

More passenger vehicles are being made with engines that can burn **biodiesel**, an alternative to petroleum-based fuels, Pearson said. A new federal law also sets a biofuels standard of 36 billion gallons per year by 2022.

**Biodiesel** sales volume in the United States doubled last year after tripling in each of the two previous years, Pearson said. "We do foresee **biodiesel** industry volumes to again grow for 2008," she said.

Farmers in southeastern North Dakota are counting on that as they develop a plant to crush soybeans and refine the oil. The Ag Plus Cooperative plant would be big enough to crush up to 40 percent of the soybeans grown in the state.

Co-op director Dale Beck said plant officials will decide at the appropriate time whether it will be more profitable to sell oil to the energy or food industries. "We're looking at primarily **biodiesel**," he said.

Beck is not worried about a downturn in the **biodiesel** industry.

"The part ... that is having trouble (are) the standalone **biodiesel** refineries. They're dependent on buying their oil from a crusher," he said.

"Soybeans are in tight supply. Demand is very high for oil," Beck said.

ND soybean plants illustrate state of biodiesel industry The Associated Press State & Local Wire February 16, 2008  
Saturday 8:13 PM GMT

The March futures price for soybean oil is nearly double what it was a year ago, Pearson said. Predictions of an increase in **biodiesel** demand also have helped drive up the price of oil, she said.

Leschied said demand from the food industry also is playing a role. "The food side is prepared to bid whatever it can to keep (the oil) from going into the energy sector," he said.

Tom Lilja, executive director of the North Dakota Corn Growers Association, said the declining value of the U.S. dollar is leading to more exports of such crops as corn and soybeans, both of which can be used to make fuel. That, in turn, leads to tighter supplies and higher prices.

"It's cheaper for countries like China to buy," Lilja said.

About 80 percent of the **biodiesel** manufactured in the United States is made from soybean oil. Pearson said industry officials are promoting the research and development of new feedstocks, such as algae, for **biodiesel**.

And new **biodiesel** plants continue to come on line, though the pace has slowed over the past year. Production capacity has grown from 85 million gallons in 2003 to the current 2.2 billion gallons.

"We will continue to see increased **biodiesel** production," Pearson said.

Northwood Mills, which broke ground two years ago and began operating last summer, feels canola is the better oilseed for its situation.

"It looks a lot different in the world from when we started," Leschied said. "The dynamics have changed a whole bunch."

**LOAD-DATE:** February 17, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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AgWeb.com

February 15, 2008

## Wintry Climates Agree With **Biodiesel**

**BYLINE:** By Jeanne Bernick

**HIGHLIGHT:** It's cold outside, but gelling isn't an issue for **biodiesel**

**Biodiesel** used to have a bad rap for gelling at low temperatures. Thanks to better fuel quality and fuel management practices, though, folks living in cold climates are warming up to **biodiesel**.

"I just moved snow in zero degree weather using my small tractor filled with **biodiesel**, and it fired up easily," says Ed Hegland, a soybean farmer near Appleton, Minn. The tractor, which is not stored in a heated shed, was half full of B20 (20% **biodiesel**, 80% petroleum diesel) after harvest. Hegland simply blended in No. 1 diesel to prevent gelling.

In snowy New Hampshire, the Cranmore Mountain ski resort fuels its snow grooming fleet with B20. "We know that even with heavy snow falling and temperatures around 20 below we can count on our **biodiesel**-powered vehicles to start up and perform with no problems at all," says Jim Mersereau, operations director at the resort.

The city of Brooklyn Park, Minn., has used **biodiesel** blends since 1999 in its fleet of more than 100 vehicles, which includes fire trucks and utility and police vehicles.

Steve Lawrence, superintendent of operations and maintenance for the city, says they have had no weather issues at all with B20.

The city made the switch to eliminate the cloud of black soot that used to fill the garage when the vehicles were fired up each morning. "With **biodiesel**, the sooty loud is gone, and the air the drivers breathe is cleaner," Lawrence says.

Like regular diesel fuel, **biodiesel** can gel at very low temperatures. But users can prepare for this in a number of ways, says Richard Nelson, director of engineering Extension for Kansas State University's College of Engineering.

The most important precaution users can take is to work with a reputable supplier and make sure they use **biodiesel** that meets the national standard, ASTM D 6751, Nelson says. "Secondly, they need to understand that good fuel management is extremely important and that it is amplified in the winter," he adds.

Common winter practices to ensure diesel engines have a warm reception for B20 include:

- . Block and filter heaters.
- . Store vehicles indoors.
- . Blend **biodiesel** with kerosene.
- . Blend **biodiesel** with other high-quality diesel fuels or diesel that has been treated with the proper cold weather additives.

"Some of the issues we had two years ago were traced back to problems with the diesel fuel quality--not the **biodiesel** component," says Hegland, who is also president of the National **Biodiesel** Board.

Support from New Holland. A recent announcement by New Holland highlights the company's support of using B100 in all equipment with New Holland manufactured diesel engines, including electronic injection engines with common rail technology. Approximately 80% of New Holland brand products with diesel engines can now operate on B100.

Details on the New Holland models that run on B100, as well as the company's safety requirements, are available from New Holland dealers or at [www.newholland.com/na/biodiesel](http://www.newholland.com/na/biodiesel).

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**LOAD-DATE:** February 17, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Web Publication

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## The Arizona Republic (Phoenix)

February 15, 2008 Friday

Final Chaser Edition

### Fuel from the grease trap

**BYLINE:** Ryan Randazzo, The Arizona Republic

**SECTION:** BUSINESS; Pg. 1

**LENGTH:** 1175 words

Eating fried chicken wings and french fries might not clean out your arteries, but it actually could help clean up the air, now that two local companies are transforming waste cooking oil from local restaurants into diesel fuel.

Amereco Biofuels Corp. expects its first deliveries this month to commercial customers in Tucson and Las Vegas, said Bill Sheaffer, executive vice president of marketing for the plant, located west of Phoenix in the town of Arlington.

And soon Chandler-based AZ **BioDiesel** expects to pass fuel-testing standards and begin production, said Christopher Rees, vice president of sales and marketing.

**Biodiesel** can be used in most diesel engines without modifications, but is a solvent and can loosen engine deposits caused by traditional diesel, clogging fuel filters at first. Its most common use is in fleets, such as those operated by cities and school districts, because blending it with diesel is a simple way to reduce pollution without buying new vehicles.

"**Biodiesel** is an easy transition," Sheaffer said.

Officials are hopeful more Arizona stations will offer the fuel now that it is produced locally. **Biodiesel** usually retails about a dime more per gallon than regular diesel, even with subsidies available to fuel blenders.

"We are very interested in this," said Bob Kec, the owner of Western States Petroleum, which offers a 99 percent **biodiesel** blend at a South 15th Avenue location in Phoenix and a blend of 20 percent in Carefree. "The more producers we have, the better off the marketer is."

The 99 percent fuel often is mixed with regular diesel, especially in cold weather, which can thicken pure **biodiesel**.

The **biodiesel** at Kec's pumps is made from soybeans, whereas Amereco and AZ **BioDiesel** are recycling a variety of oil that normally would go into landfills.

Restaurants are prohibited from dumping cooking oil down the drain, and often must pay for it to be collected.

The two local refineries join about 169 others operating in the nation, most in farming regions where they have access to fresh crops, according to the National **Biodiesel** Board. However, statistics from the board show that many of the 60 plants under construction or expansion this year will use recycled food oil.

Amereco ready to go

Amereco works with companies already in the grease-collection business for its stock.

Officials with Amereco would not disclose their investment for their plant, which Sheaffer said could handle orders of 15 million gallons a year and has acres to expand.

Amereco is buying oil collected from across the Phoenix area and as far away as Las Vegas and Salt Lake City, paying 10 cents to 20 cents per pound, President Martin Gerst said.

Amereco's facility is a simple series of storage containers, the first containing thousands of gallons of rancid fryer grease that eventually will leave the facility resembling dark sesame oil.

Amereco's process for making the fuel takes one to two days, depending how many forks and napkins, and especially water and glycerin, must be separated from a batch of waste oil.

The company is considering uses for the leftover glycerin, which might fire a boiler or be purified for cosmetic uses.

Firm wants bus business

Unlike Amereco, AZ **BioDiesel** has its own collection company to bring it grease for **biodiesel**.

AZ **BioDiesel** has spent more than \$500,000 developing its plant, which Rees said should be able to produce 5 million gallons of fuel annually.

The company formed last spring, and now has agreements to collect grease from about 300 restaurants, Rees said, averaging about 75 gallons a restaurant per month.

Because it is awaiting certification for its fuel, AZ **BioDiesel** hasn't yet ramped up production.

The company has some commitments from companies that operate small diesel-vehicle fleets to buy its fuel once in production, and officials plan to target school districts for sales, he said.

"We are strictly an Arizona company," he said. "Diesel emissions are extremely harmful to children, and we want to target bus fleets first. We don't plan to export any **biodiesel** out of state."

Better than ethanol

**Biodiesel** officials go to great lengths to distance their product from ethanol, a gasoline substitute commonly made from corn in the United States. Ethanol has been scrutinized recently for its inefficiency and pressure on food prices.

Unlike ethanol, **biodiesel** does not compromise fuel efficiency when used as a substitute for fossil fuel. Diesel and **biodiesel** engines both offer higher mileage than gasoline engines. And if produced from waste oil, **biodiesel** doesn't compete with food crops.

"Philosophically, we don't think it's the right thing to do to use food for fuel," Sheaffer said.

**Biodiesel** also can reduce greenhouse gasses that contribute to global climate change. And it produces less visible air pollution than die-sel.

Because it's a relatively simple process to refine cooking oil into fuel, diesel-engine hobbyists are known to cook up their own **biodiesel**. Still, **biodiesel** requires methanol, a natural-gas product, to make up about 10 percent of the fuel's volume.

"You can make it at home, but we don't recommend it," said Sheaffer, who also volunteers as an alternative-fuels advocate.

"It doesn't take a rocket scientist to figure out that being dependent on the Middle East, Venezuela, Argentina and other places for our oil isn't a good thing."

-

Places to buy **biodiesel**

Western States Petroleum offers **biodiesel** in Phoenix and Carefree. The location at 450 S. 15th Ave. in Phoenix sells a 99 percent **biodiesel** blend that was priced at \$3.53 a gallon this week. Another location, at 7201 E. Cave Creek Road in Carefree, offers a 20 percent blend at \$3.48 a gallon.

Tucson, Oracle and Winslow also have stations offering the fuel, according to the

National **Biodiesel** Board and [www.biodiesel.org](http://www.biodiesel.org).

Regular diesel averaged about \$3.35 a gallon in the Phoenix area this week, AAA Arizona reports.

-

Amereco Biofuels Corp.

Fuel from the grease trap The Arizona Republic (Phoenix) February 15, 2008 Friday

15 million: Annual gallons of production capability.

1-2 days: Time to refine used cooking oil to **biodiesel**.

10: Employees.

Stage: Expects first deliveries this month.

Contact: [www.amereco.biz](http://www.amereco.biz), 888-415-5559.

**AZ BioDiesel**

5 million: Annual gallons of production capability.

300: Restaurants in collection program.

8: Employees.

Stage: Still signing up restaurants to collect grease and awaiting standard certification for its product.

Contact: [www.azbiodiesel.com](http://www.azbiodiesel.com), 480-344-1480.

Ethanol blends

Ethanol, commonly made from corn and other starchy crops, also recently was introduced in the state, with the first Arizona refinery opening in the town of Maricopa last year.

The \$74 million plant is run by Pinal Energy. The fuel is commonly added to gasoline to reduce pollution.

Western States Petroleum on 15th Avenue also sells an 85 percent blend of ethanol.

Franchises

Orlando-based Xenerga Inc. offers 5 million gallon, "turnkey" **biodiesel** plants, complete with training. The company requires a \$1.95 million investment. The company hopes to open two refineries in Arizona.

Web site: [www.xenerga.com](http://www.xenerga.com)

Reach the reporter at [ryan.randazzo@arizonarepublic.com](mailto:ryan.randazzo@arizonarepublic.com), or 602-444-4331.

**LOAD-DATE:** February 16, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newspaper

**JOURNAL-CODE:** pho

Hartford Courant (Connecticut)

February 15, 2008 Friday  
3 ENFIELD/NORTH CENTRAL EDITION

## SUPPORTERS HEARD ON **BIODIESEL** PLANT; 'NOT IN MY BACKYARD' MENTALITY MUST BE RESISTED, THEY SAY

**BYLINE:** LYNN DOAN; Courant Staff Writer **SECTION:** CONNECTICUT; Pg. B3  
**DATELINE:** SUFFIELD

Residents favoring a proposed **biodiesel** production plant found a voice Thursday during a public hearing on the \$65 million project.

Previous public meetings on the plant, which would turn 50 million gallons of primarily vegetable oil into **biodiesel** fuel annually, have attracted droves of residents who fear it would bring truck traffic, pollution and the potential for large-scale fires. But during Thursday's hearing, nearly a dozen residents spoke in support of CT **Biodiesel**, which would become the largest **biodiesel** production company in the Northeast.

Proponents urged the zoning and planning commission to resist a "not in my backyard" mentality and grant CT **Biodiesel** permission to build its 25,000-square-foot production plant at the south end of Firestone Drive, near Bradley International Airport.

"Suffield has to move forward," resident Jim Sheridan said. "We are going to die as a town if we don't."

If CT **Biodiesel** builds in Suffield, it would become the town's single largest taxpayer, generating more than \$400,000 in projected property taxes a year. Currently, 92 percent of the town's real estate tax revenue comes from residential properties.

The company, which plans to sell the cleaner-burning, renewable fuel as heating oil and fuel for diesel engines, would also create 38 jobs.

"If this town can do anything to increase the number of jobs out there for people, we ought to do it," said resident Justin Donnelly, chairman of the town finance board.

Donnelly and other residents said the plant would put Suffield on the map for alternative fuels, setting an example for the state and even the nation.

"My fondest hope is that, a year and a half from now, I'll be driving over the interstate and I'll be coming behind a truck," Donnelly said, "and that truck will say, 'This truck is being fueled by **biodiesel** made in Suffield, made in the United States.'"

Thursday's public hearing got off to a rocky start when a woman stood and interrupted a report by the town engineer to remind the zoning and planning commission that the meeting had been publicized as a "public hearing." CT **Biodiesel** president Garth Klimchuk agreed with residents and urged the commission to cut short the engineer's report and move on to public comment.

"With all due respect, we need to hear it. Let's move it to public comment immediately," Klimchuk said. "We need to hear everyone tonight."

About a half-dozen residents spoke in opposition to the plant, describing **biodiesel** production as "chemical manufacturing," which is prohibited by town zoning regulations on the Firestone Drive property.

"If these people don't know it's a chemical manufacturing facility, God help the people who work there," resident Ron Parise said. "God help the people who are living within the vicinity of the facility."

SUPPORTERS HEARD ON BIODIESEL PLANT; 'NOT IN MY BACKYARD' MENTALITY MUST BE  
RESISTED, THEY SAY Hartford Courant (Connecticut) February 15, 2008 Friday

But company officials insist that all products used in the process are "finished or semi-finished," not raw chemicals. And compared to the chemicals at other manufacturing plants in town, some residents say, **biodiesel** and the methanol used to make it are benign.

The chemicals used at Praxair, formerly Union Carbide, make "CT **Biodiesel** look like a flower farm," resident Jim Sheridan said.

Contact Lynn Doan at [ldoan@courant.com](mailto:ldoan@courant.com)

**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newspaper

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Marketwire

February 15, 2008 Friday

## NRC THE GOVERNMENT OF CANADA SALUTES FOREST BIO-PRODUCTS FOR ITS INNOVATIONS IN **BIODIESEL** TECHNOLOGIES

SAULT STE. MARIE, ONTARIO--(Marketwire - Feb. 15, 2008) - The Honourable Jim Prentice, Minister of Industry and Minister responsible for National Research Council Canada (NRC), today presented a Canadian Innovation Leader Certificate to Forest BioProducts Inc., at the company's facility in Sault Ste. Marie.

Forest BioProducts is a leader in **biodiesel** production technologies that allow small-scale producers to produce their own fuel from a variety of feedstocks.

"Guided by our Science and Technology strategy, the Government of Canada is helping Canadian researchers and entrepreneurs deliver innovative solutions to challenges, improve our economic competitiveness, and help Canadians acquire the skills they need to participate in the economy," said Minister Prentice. "It gives me great pleasure to join NRC in recognizing Forest BioProducts for their contribution to Canada's scientific and economic growth."

The S&T Strategy will help businesses innovate by increasing the effects of Government of Canada investments in research. It will help better align Canada's post-secondary research capacity with the needs of business. And it will ensure that the right conditions are in place to support innovation in S&T. The Strategy is a multi-year plan that will create a business environment that encourages innovation by the private sector and will guide the intelligent, strategic investment of public funds.

The Canadian Innovation Leader initiative celebrates the successes of innovative Canadian firms identified by the NRC Industrial Research Assistance Program (NRC-IRAP), which assists Canadian small and medium-sized enterprises in their technology and R&D projects. NRC has been supporting Forest BioProducts since its early days.

"Forest BioProducts has ably demonstrated that researching, developing and bringing to market new technologies provides Canada with a competitive advantage," said Pat Mortimer, Vice-President, Technology and Industry Support, NRC. "NRC is proud to have taken part in supporting this innovative Canadian company."

Forest BioProducts Inc. is leading the way in introducing new alternative energy and value-added technology with small-scale **biodiesel** manufacturing as one of its top technologies, enabling individuals to meet their own energy needs in an environmentally-sustainable way.

"The bioeconomy is being driven by the fact that the price of fossil fuels has increased dramatically and the cost is likely to continue on an upward trend," explained company president and CEO, Dr. Luc Duchesne. "There is a growing need for renewable energy, plastics and other products that are generated using renewable resources. Essentially, we are finding ways to do more with what we already have. This is a tremendous opportunity for northern Ontario, and in fact, for all of Canada and has global market implications. We are very grateful that NRC-IRAP continues to support Forest BioProducts with its development of a fully-automated, mobile, **biodiesel** manufacturing plant."

By addressing the environmental and economic needs for alternative fuel, Forest BioProducts is providing Canadian SMEs with the increased independence of producing their own fuel. The company's GREENSTAR **Biodiesel** System™ is a biodiesel reactor that converts a variety of oils (sunflower, soybean, flax, as well as waste oil from restaurants) to biodiesel through a batch process.

Recognized globally for research and innovation, the National Research Council (NRC) is a leader in the development of an innovative, knowledge-based economy for Canada through science and technology.

For more information, please consult our Web site: [irap-pari.nrc-cnrc.gc.ca/main\\_e.html](http://irap-pari.nrc-cnrc.gc.ca/main_e.html).

NRC THE GOVERNMENT OF CANADA SALUTES FOREST BIOPRODUCTS FOR ITS INNOVATIONS IN  
BIODIESEL TECHNOLOGIES Marketwire February 15, 2008 Friday

**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

**ACC-NO:** A2008021564-17924-GNW

**PUBLICATION-TYPE:** Other

**JOURNAL-CODE:** WCCN

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Monterey County Herald (California)

Distributed by McClatchy-Tribune Business News

February 15, 2008 Friday

## MST eyes mustard seed for fuel: Project tests idea of locally made **biodiesel**

**BYLINE:** Larry Parsons, The Monterey County Herald, Calif.

**SECTION:** STATE AND REGIONAL NEWS

Feb. 15--The possible source of new fuel for Monterey-Salinas Transit's bus fleet was planted Thursday on land owned by a South County vineyard.

Twenty acres of two colorfully named varieties of mustard -- Pacific Gold and Wild California -- will be harvested in the fall, when the seeds will be squeezed for oil to be refined into **biodiesel** fuel.

**Biodiesel** fuel is not a startling innovation in the public transit world. Thousands of buses in the San Francisco and Seattle areas are already burning part-**biodiesel** fuel mixtures, said Carl Sedoryk, general manager of the county transit agency.

But most **biodiesel** comes from Midwestern corn and soy crops, causing competition for food crops and carrying shipping costs "that almost defeat the purpose," Sedoryk said.

Looking for a home-grown, sustainable source of **biodiesel** is the main goal of the experiment that started Thursday in the fields beside Jolon Road owned by San Bernabe Vineyards.

Mustard seed can produce higher volumes of **biodiesel** than corn or soy, and the spicy mustard meal left over from the refining process can be used as a fertilizer and natural pesticide for crops.

"It's truly a trial to see how it goes. If it's successful, we may grow more," said Claude Hoover, president of San Bernabe Vineyards.

Others teaming up on the project are Energy Alternative Solutions Inc., which will process the mustard **biodiesel** at its Gonzales refinery, and Farm Fuel Inc. of Aptos, which provided the seed. The

land, seed and refining are all being donated.

"We latched onto the idea of whether we can produce a locally refined **biodiesel** fuel," Sedoryk said. "We're going to do this demonstration to see if it's a viable concept and sustainable locally."

Wild varieties of mustard grow on millions of acres of California orchards and vineyards each spring, filling row upon row with bright yellow flowers.

The plants don't need irrigation if planted during winter, Hoover said.

The two varieties, separated by a 10-acre control stand of barley, will be compared by their yields. Hoover estimated that 1,500 to 2,500 pounds of mustard seed will be produced per acre.

Transit officials say the 20 acres could produce about 1,700 gallons of **biodiesel**. Mixed at a 4-to-1 ratio with the low-sulfur diesel used by the agency's 76 buses, the fuel mixture could power a single bus for about 13 months.

"I'm not (saying) it will be a solution to all **biodiesel**, but it's just a way Monterey County can use its assets locally," Sedoryk said.

**Biodiesel** fuel is already being made from grease and fat collected from local restaurants and hotels in the hospitality industry. This project could bring the county's agricultural industry into the **biodiesel** fold, Sedoryk said.

The project evolved from the "Competitive Clusters" program to foster public-private partnerships in economic development. It's sponsored by the county Office of Economic Development and the Monterey County Business council.

Business council president Mary Ann Leffel said in a statement, "Here is another groundbreaking public-private partnership ... that will showcase breakthroughs in green technology."

Larry Parsons can be reached at 646-4379 or [lparsons@montereyherald.com](mailto:lparsons@montereyherald.com)

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States News Service

February 15, 2008 Friday

## GOV. BLUNT HIGHLIGHTS PLAN FOR FIVE PERCENT **BIODIESEL** STANDARD

**BYLINE:** States News Service **DATELINE:** COLUMBIA

The following information was released by the office of the governor of Missouri:

Gov. Matt Blunt today highlighted his plan to require all diesel fuel sold in Missouri to contain five percent **biodiesel** (B5). The B5 requirement was one of the priorities the governor outlined in his State of the State address.

"Our state has great potential in the emerging renewable fuels industry, and if the fields of Missouri's farm families are to become the oil fields of the 21st Century, we need to enact policies that allow us to position ourselves at the forefront of this thriving industry," Gov. Blunt said. "A B5 Standard is good for Missouri's environment and will build on the ten percent ethanol standard we enacted further establishing Missouri as a national leader in the renewable fuels."

"The **biodiesel** standard and its quality standards is a win-win-win for Missouri's consumers, farmers, and the environment. This is the single most important thing we can do to fuel a vibrant economy in Rural Missouri in 2008," Sen. Bill Stouffer said.

"A B5 Standard is the next step in advancing Missouri's growing biofuels industry. This standard is critical to the success of Missouri's biofuels industry and I appreciate Gov. Blunt's leadership on this issue," said Dale Ludwig, Missouri Soybean Association Executive Director/CEO .

Gov. Blunt's plan is included in Senate Bill 759, sponsored by Sen. Bill Stouffer. The legislation would require diesel fuel sold in the state to contain no less than 5 percent **biodiesel** fuel by April 1, 2010. **Biodiesel** made from soybeans is much more environmentally-friendly and better for air quality than regular diesel. Research shows it cuts carbon dioxide and cancer-causing emissions by more than 75 percent. A B5 standard in Missouri will reduce particulate matter emissions by 15.4 million pounds and carbon monoxide emissions by 168 million pounds.

In addition to calling for a B5 standard, the governor is also supporting new laws to further promote alternative fuel use. He is calling for a new tax incentive program to expand access to E-85 fuel, a new state income tax deduction for Missourians who purchase qualified hybrid vehicles, and tax credits for Missourians who purchase E-85 gasoline.

Gov. Blunt has been a dedicated supporter of renewable fuels in our state. The governor fulfilled a promise he made to Missourians when he signed legislation in 2006 requiring all gasoline offered for sale in Missouri to contain 10 percent ethanol (E-10). The new standard championed by Gov. Blunt went into effect at the beginning of this year. Missouri is just the third state to implement a broad ethanol requirement.

The governor has also worked to pay back the incentive payments over the last three years that were promised to the Missouri farm families that invested in alternative fuel cooperatives, but were not made before he took office. He also signed an executive order and supporting legislation requiring that at least 70 percent of new vehicles purchased by the Office of Administration's state fleet are flex fuel vehicles. Automotive Fleet Magazine ranked Missouri tenth against other states in the number of alternative fuel vehicles as a percentage of the total state fleet, and 59th in the country against thousands of private, state, local and federally managed vehicle fleets. The state fleet currently has 36 hybrid electric and 1,717 E-85 vehicles.

**LOAD-DATE:** February 16, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

St. Joseph News-Press (Missouri)

Distributed by McClatchy-Tribune Business News

February 15, 2008 Friday

## Blunt highlights **biodiesel** plan at AGP: Governor touts B5 standard during visit to St. Joseph

**BYLINE:** Clinton Thomas, St. Joseph News-Press, Mo.

**SECTION:** BUSINESS AND FINANCIAL NEWS

Feb. 15--Gov. Matt Blunt wants to pump up the Missouri **biodiesel** industry.

The governor toured Ag Processing's **biodiesel** plant in St. Joseph on Thursday and highlighted his plan to increase the fuel's presence in the Missouri marketplace.

Mr. Blunt wants all **biodiesel** sold in the state to contain a blend of at least 5 percent **biodiesel**. The plan is similar to the 10 percent ethanol standard that went into effect Jan. 1.

"Our state has great potential in the emerging renewable fuels industry, and if the fields of Missouri's farm families are to become the oil fields of the 21st century, we need to enact policies that allow us to position ourselves at the forefront of this thriving industry," Mr. Blunt said.

Sen. Bill Stouffer, R-Napton, proposed a bill early this year that would implement a B5 standard by April 1, 2010. The senate passed a similar bill in 2007, but the issue never came to a vote in the General Assembly. Mr. Blunt said he was confident the legislation would take higher priority this session.

"Our efforts were focused on implementing the E10 standard last year," Mr. Blunt said. "Now we can really look at doing the same thing for **biodiesel** with a B5 standard."

Missouri's bill would create the largest **biodiesel** standard in the nation. Minnesota has passed and implemented a 2 percent **biodiesel** standard. Louisiana, Oregon and Washington also have passed 2 percent mandates, but have yet to implement the legislation due to a lack of in-state **biodiesel** production.

Missouri would not have such production issues. The bill would create demand for about 60 million gallons of **biodiesel** -- half of the 120 million gallons the state is expected to produce by the end of 2008.

AGP's **biodiesel** facility has a capacity of 28 million gallons per year. The plant has produced **biodiesel** since September 2007, exclusively from the soybean oil produced at AGP's crush facility next door.

Northwest **Biodiesel** also began production in St. Joseph last. Terra Bioenergy is in the early stages of construction of **biodiesel** plant on Stockyards Expressway.

Clinton Thomas can be reached at

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**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

Tax break would be provided for biodiesel The Associated Press State & Local Wire February 15, 2008 Friday 8:24 PM GMT

The Associated Press State & Local Wire

February 15, 2008 Friday 8:24 PM GMT

## Tax break would be provided for **biodiesel**

**SECTION:** STATE AND REGIONAL

**DATELINE:** PIERRE S.D.

It may be a few years before **biodiesel** production in South Dakota reaches the point that would trigger a tax break at the pump for motorists.

That's what legislators were told Friday during review of a bill to reduce the state motor fuel tax on **biodiesel**.

**Biodiesel** is a blend of soybean oil and diesel fuel.

SB148 would cut the 22-cent tax on diesel fuel to 20 cents if it contains at least a 5 percent blend of plant oil.

The bill cleared the House State Affairs Committee 11-0, sending it to the House floor.

The tax break would not start until **biodiesel** production capacity in the state reaches 20 million gallons a year.

**LOAD-DATE:** February 16, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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The Associated Press

February 14, 2008 Thursday 9:58 PM GMT

## Gov. Crist releases greenhouse gas scorecard of Florida's state government

**BYLINE:** By DAVID FISCHER, Associated Press Writer  
**SECTION:** BUSINESS NEWS**DATELINE:** TALLAHASSEE Fla.

State agencies produced carbon emissions equivalent to almost 195,000 passenger cars or more than 115,000 homes last year, according to a report released by the governor on Thursday.

Gov. Charlie Crist released Florida's first comprehensive assessment of greenhouse gas emissions produced by state government. The study identifies the amount of greenhouse gases produced by state agencies during the 2006-07 budget year. The report will serve as a baseline to help track future emissions so the state can make its buildings and vehicles more energy efficient. Future emissions reports will be issued four times a year.

"Reducing the state government's carbon emissions will reduce the our energy costs," Crist said. "This is a wise use of our taxpayers dollars. It will protect all that is special about Florida for our future."

Crist signed an executive order at a climate change summit in July calling for the state government to lead by example in reducing emissions in Florida. The state government is working to reduce emissions 10 percent by 2012, 25 percent by 2017, and 40 percent by 2025.

To meet those goals, the state will begin improving energy efficiency in existing buildings and setting higher building standards for future construction. State agencies will buy fuel efficient vehicles, using ethanol and **biodiesel** when available.

"We're taking the same actions that we would actually ask industry to take," said Department of Environmental Protection Secretary Michael Sole.

The state government is the largest employer in Florida, with more than 100,000 workers and 17 million square feet of office space. The state can use that position and drive the market and move green technologies forward, said Department of Management Services Secretary Linda South.

In his budget released last month, Crist proposed spending \$200 million more than double the current budget to promote alternative sources of energy and combat climate change. In it, Crist includes \$50 million to encourage renewable energy sources and \$42.5 million for tax exemptions and grants for companies that develop ethanol and biofuels. Another \$107.5 million would go to climate change initiatives and recruiting businesses that do green technology research and development.

**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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# **Boston Business Journal**

Boston Business Journal

February 14, 2008 Thursday

## **Boston, Cambridge recognized as green cities**

**LENGTH:** 409 words

Two Massachusetts cities made the top 10 list in the March issue of Popular Science's 50 most innovative cities in the U.S.

Boston was ranked third -- behind San Francisco and Portland, Ore. -- and Cambridge sixth on the list of "greenest" cities based on criteria such as electricity use, transportation habits, air quality and recycling programs. Popular Science used raw data from the U.S. Census Bureau and the National Geographic Society's Green Guide which collected survey data and government statistics for American cities of over 100,000 people in more than 30 categories.

Out of a possible 30 points cities could score based on the criteria Boston scored 22.7 and Cambridge scored 22.2 points. The magazine featured a "case study" about Boston's preliminary plans for a plant that would turn 50,000 tons of fall leaves and grass into power and fertilizer. Bacteria feeding on the grass would make enough methane to power at least 1.5 megawatts' worth of generators, while heat and agitation would hasten the breakdown of leaves and twigs into compost, according to the magazine.

The city of Boston released a statement about the news.

"We've already made Boston a leader on climate change issues and this acknowledgment only inspires us further to be number 1 when it comes to being green," said Mayor Thomas Menino in the statement. "Beantown truly is Greentown. Being green helps us build a better city and improve our economy at the same time. The success of Boston depends on us making the city greener."

Among the initiatives Menino has undertaken to increase Boston's green status include becoming the first city in the nation to implement green building zoning requiring large private development to meet the U.S. Green Building Council's LEED standards at a "certifiable" level. The city is also the largest municipal purchaser of renewable energy and **biodiesel** in New England, according to the statement.

Also last April, Menino announced initiatives to further reduce Boston's emissions that include: designing and implementing programs to increase recycling of all materials by 10 percent by 2012; plans to plant 100,000 trees in the city by 2020; evaluating the feasibility of installing solar, wind, combined heat and power, and green roof installations, and requiring municipal departments to include a minimum of 11.7 percent of power generated from renewable resources and that by 2012 at least 15 percent come from renewable sources.

**LOAD-DATE:** February 14, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newspaper

**Greenwire**

February 14, 2008 Thursday

## BIOFUELS: Startups turning corn ethanol's waste into bounty

**SECTION:** Business, Finance & Technology Vol. 10 No. 9

Michael Burnham, Greenwire senior reporter

Biofuels developer GreenShift Corp. announced a deal yesterday with United Ethanol LLC to extract up to 1.5 million gallons per year of crude corn oil from the mealy grains that remain after corn has been brewed into ethanol.

New York-based GreenShift would install industrial equipment at United Ethanol's Milton, Wis., corn ethanol refinery to extract the pungent, yellow oil from distillers grains. GreenShift would sell the feedstock to domestic **biodiesel** producers, GreenShift's Chief Financial Officer Edward Carroll said.

"It's not a food-grade oil, so it's a great [fuel] feedstock," Carroll added.

GreenShift has installed similar oil-extraction equipment in 10 corn ethanol refineries throughout the country. By the end of the year, the company will extract and sell more than 10 million gallons of crude corn oil to **biodiesel** refiners, Carroll projected.

Crude corn oil has traditionally been used to enhance animal feed, but the oil is being used increasingly to make **biodiesel** as petroleum prices rise.

Last fall, GreenShift (OTCBB: GSHF) entered a joint venture with Minneapolis-based Global Ethanol Inc. to extract 10 million gallons of crude corn oil annually from ethanol refineries in Iowa and Michigan. The oil would be used as feedstock in a **biodiesel** plant that the companies are building in Lakota, Iowa (Greenwire, Nov. 15, 2007).

Carroll said the 100-million-gallon-a-year refinery is slated to begin producing fuel this summer.

**LOAD-DATE:** February 14, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

States News Service

February 14, 2008 Thursday

## NUNES / ROSS INTRODUCE BIPARTISAN ENERGY BILL

**BYLINE:** States News Service

**DATELINE:** WASHINGTON

The following information was released by the office of California Rep. Devin Nunes:

Representatives Devin Nunes (R-CA) and Rep. Mike Ross (D-AR) introduced bipartisan legislation Thursday to increase our nation's energy security and to put our nation on a path towards energy independence. The bill, known as the American-Made Energy Act of 2008, will make significant investments in alternative and renewable energy, and encourage increased domestic fuel production to address our nation's failed energy policies and rising gas and electricity prices.

Congress has consistently failed to enact the reforms necessary to provide our nation long term energy security and the only way to achieve this important goal is bipartisan cooperation. The American-Made Energy Act is the result of such cooperation, said Rep. Nunes.

Every year, America becomes increasingly dependent on foreign oil. Some of that oil comes from our enemies, including Iran and Venezuela. Congress knows that this dependence is dangerous and the American people expect us to act. We have the ingenuity and resources in the United States to produce all of the energy we need. If Congress moves forward with the American-Made Energy Act, we will witness this potential become reality, said Rep. Nunes.

America has been dependent on foreign oil far too long and we must begin to develop our own energy resources, Ross said. Securing America's energy future and putting substantive policies in place to drive down our soaring energy costs requires a multi-faceted approach, which consists of increasing our domestic energy production, encouraging the use of alternative and renewable energy sources, promoting conservation, utilizing energy efficient technologies and helping our working families who are being strained by ever-increasing energy prices.

This bill will not only help reduce our dependence on foreign sources of oil, but it will reinvest the revenue from the sale of our increased domestic energy production into energy sources like cellulosic ethanol and **biodiesel**, which creates new American jobs. We can become better stewards of our environment by utilizing new technologies that will also create new jobs here at home. At a time when Americans across the country, and especially here in Arkansas, are paying the price for America's failed energy policies, we must begin to invest in to provide relief to our working families, farmers and small businesses.

The American-Made Energy Act of 2008 aims to increase our nation's energy independence through the following measures:

### INCREASES DOMESTIC PRODUCTION

Opens up the Outer Continental Shelf (OCS) and the Arctic National Wildlife Refuge (ANWR) to exploration utilizing 21st century environmentally friendly technology. These funds will be deposited into a newly created American made energy trust fund in which the federal share of lease and royalty revenue will be used to pay for the provisions in the bill.

### PROMOTES HOMEGROWN BIOFUELS

Extends and expands tax credits for the development of biofuels, such as cellulosic ethanol and **biodiesel**, and the installation and use of solar and fuel cell technologies for business and residential use. It also provides grants to build cellulosic biomass ethanol plants and authorizes cellulosic facilities for bonus depreciation.

Extends the loan guarantee program for biorefineries, increases grant funding for biofuel research and development projects, establishes a forest bioenergy research program, and creates an advanced biofuel credit program to acknowledge those who are blending more than the required amount of biofuels.

#### ENCOURAGES ALTERNATIVE and RENEWABLE FUEL PRODUCTION

Includes a comprehensive package to promote coal to liquid fuel production, including expanded tax credits for projects that demonstrate significant carbon capture and sequestration capabilities that will combat global warming.

Supports renewable electricity by extending tax credits for the production of electricity from renewable resources and authorizes new clean renewable energy bonds for public power providers and electric cooperatives. It also expands the tax credit for electricity produced from agriculture waste.

Supports nuclear energy by creating an investment tax credit to build new nuclear facilities and states that by the year 2050, 40 percent of our entire nation's electricity shall be produced from nuclear sources.

#### HELPS WORKING FAMILIES and INVESTS IN OUR ECONOMY

Promotes the development and use of alternative fuel vehicles by creating a consumer tax credit to buy new plug-in electric and flex-fuel vehicles and expands the use of **biodiesel** by federal and state government vehicle fleets.

Supports energy efficiency by extending and modifying the new energy efficient home credit and the energy efficient commercial buildings deduction.

Rep. Nunes, a native of Visalia, California, is a member on the House Ways and Means Committee. Rep. Ross holds a seat on the House Energy and Commerce Committee and the Energy and Air Quality Subcommittee.

**LOAD-DATE:** February 15, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

Staten Island Advance (New York)

February 14, 2008 Thursday

## Turning ferries into 'green' machines

**BYLINE:** SALLY GOLDENBERG and MAURA YATES, staffs

**SECTION:** TRANSPORTATION; Pg. A05

Council votes to require city's vessels to run on low-sulfur-emission fuel The City Council passed legislation yesterday that would solidify the city's efforts to turn the fleet of orange Staten Island ferries into "green" machines, running on low-sulfur-emission fuel and exhaust-reducing technology.

The process, which has been under way since July, would have to be completed by July 1 of this year.

Approved by a 50-0 vote yesterday, the measure requires all city-run ferries to make the switch.

**The John F. Kennedy, the oldest boat in the fleet, was the first to use the new fuel, which is a blend of the same cleaner-burning, ultra-low-sulphur diesel fuel used in tractor-trailers, along with 5 percent biodiesel, an alternative fuel made from natural sources like soybeans, corn or animal fats.**

The entire ferry fleet typically burns between 60,000 and 70,000 gallons of fuel each week. The new fuels are about 10 cents per gallon more expensive than the low-sulphur diesel previously used in the boats.

The small overnight ferry Alice Austen was the first in line for the smog-cutting initiative in 2006, when a selective catalytic reduction system, similar to a car's catalytic converter, was installed in the boat. The device creates a chemical reaction that reduces some of the emissions from the smokestack. Since the change, the Austen has pumped out about 16.5 fewer tons of nitrogen oxide a year.

The engines of the ferryboats S.I. Newhouse and Andrew J. Barberi already have been rebuilt, and the boats now spew about 124 fewer tons of nitrogen oxide each year. The changeover for the rest of the fleet is scheduled to be completed during routine drydock maintenance over the next year.

The goal of the initiatives is to reduce harbor pollution by a few hundred tons of nitrogen oxide every year, in an attempt to offset the 500 tons belched out from diesel dredges working on the Harbor Deepening Project, under way through 2014, to deepen the harbor's shipping channels to 50 feet. The deepening is necessary to accommodate the world's largest container ships.

"We will all be able to truly enjoy the fresh harbor air without that terrible odor," said Councilman Alan Gerson, a Democrat who represents Lower Manhattan and sponsored the bill. "We can now all breathe a lot easier on the ferry, on either side of the landing."

Mayor Michael Bloomberg also supports the legislation.

**LOAD-DATE:** February 14, 2008

**LANGUAGE:** ENGLISH

**GRAPHIC:** The John F. Kennedy, above, the oldest boat in the ferry fleet, was the first to use the new fuel. Staten Island Advance file photo

**PUBLICATION-TYPE:** Newspaper

University Wire

February 14, 2008 Thursday

## Penn State administrators: **Biodiesel** exploration 'effective'

**BYLINE:** By Elizabeth Murphy, Daily Collegian; **SOURCE:** Penn State

**DATELINE:** UNIVERSITY PARK, Pa.

Pennsylvania State University's exploration into the effects of using 100 percent **biodiesel** fuel in farm tractors is now showing promise that could turn the grass greener and make the sky bluer.

The tractors, fueled by **biodiesel**, have shown no negative effects in two years, Glen Cauffman, Penn State manager of farm operations and facilities, announced Jan. 28. There has been no sign of degraded performance or power, he said.

"[Using **biodiesel**] is the right thing to do because it is contributing to the greening of Penn State," Cauffman said.

The stress to the environment is apparent in the black exhaust flowing from petroleum-based diesel fuel. The exhaust contains tiny carcinogenic particles, which are harmful to the environment and to people, Cauffman said.

"Petroleum diesel emits particles out of the exhaust of vehicles that are hazardous to the environment," he said. "Those particles are especially bad for humans because when they get in your lungs, they are very difficult for the body to get rid of."

The project began in 2002 when Cauffman began testing the limits of **biodiesel** fuel, which is made from soybeans, starting with a 20 percent blend of **biodiesel** and petroleum, known as B20.

Two years ago, New Holland, an agricultural company, joined the project, providing Penn State with three tractors to test the viability of 100 percent **biodiesel** fuel, also known as B100. The remaining 97 tractors run on B20.

Currently **biodiesel's** cost is equal to that of petroleum diesel, Cauffman said, adding that **biodiesel** as a renewable energy can be made domestically.

"It is important to give people an alternative to petroleum," Cauffman said. "Many people feel we depend too much on imported fuel. So some people call that economic security."

The use of **biodiesel** fuels can translate from farming machinery into the lives of most Americans, said Andre Boehman, professor of fuel science and engineering.

"It could make big difference. A lot more companies are going to start to produce more diesel cars in the next decade," Boehman said.

Boehman cited a test Volkswagen did on its vehicles, displaying the effectiveness of diesel fuels. The diesel-fueled car got twice the mileage per gallon in comparison, he said.

"We all should be driving diesel vehicles. They are anywhere from 30 to 100 percent more efficient in miles per gallon," Boehman said.

The use of renewable **biodiesel** fuel will be a step in the right direction, he said.

"If vehicles run on renewable **biodiesel** fuel, that will be good for the environment, good for the economy, good for all of us," Boehman said.

Some environmental activists are not so sure **biodiesel** is the answer, however. Penn State Eco-Action Public Relations Manager Ben Tutolo (sophomore-environmental systems engineering) said the net energy use may be a pitfall of **biodiesel** fuel. The energy needed to cultivate the fuel crop may outweigh the positive energy created using the **biodiesel** fuel itself, he said.

Penn State administrators: Biodiesel exploration 'effective' University Wire February 14, 2008 Thursday

"I think it is very positive that the university is doing this and is moving away from fossil fuels," Tutolo said. Boehman said he has taken this skepticism under consideration but is an advocate for it in the end.

"Not every acre of soybean used is turning into an acre of rainforest lost. Domestic renewable fuel can enhance energy security," Boehman said.

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**LOAD-DATE:** February 14, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newspaper

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The Dothan Eagle (Alabama)

Distributed by McClatchy-Tribune Business News

February 13, 2008 Wednesday

## Farmers may have new options with alternative fuels

**BYLINE:** Peggy Ussery, Dothan Eagle, Ala.

**SECTION:** LIFESTYLE

**LENGTH:** 779 words

Feb. 13--Jeff Breeden and his portable classroom have seen a lot of county fairs. He's shown the classroom off to students and most recently to peanut farmers at the Alabama-Florida Peanut Trade Show in Dothan.

Breeden, the president of **Biodiesel** Logic in Albertville, Ala., shows people how feedstock can be converted to fuel in as little as seven hours.

"This is the process," Breeden said. "Everything you need to make **biodiesel**."

And after the start-up cost to buy the equipment, making the **biodiesel** fuel costs about 75 cents per gallon, Breeden said. The machinery, he said, pays for itself within 140 to 150 days.

It seems to make sense. If you have a way to create fuel from a renewable resource, shouldn't you do it? Especially if it's cheaper and can help wean Americans off foreign oil?

Across the country, most people equate biofuels with corn, soy and even sugarcane to make ethanol. Breeden and others have been using vegetable oils, recycled cooking oil from restaurants and even peanut oil to create **biodiesel** fuels.

Just last year, the Alabama Legislature paved the way for the creation of the state's Center of Alternative Fuels, and Agriculture and Industries Commissioner Ron Sparks has been pushing the effort to promote biofuels through partnerships with cities, universities and companies like **Biodiesel** Logic.

Cities such as Montgomery and Hoover have gotten on the **biodiesel** bandwagon. Montgomery is collecting used vegetable oil from restaurants. The state agriculture and industries department processes the waste oil at the state farmer's market and uses it to make **biodiesel**. The city of Montgomery then uses the **biodiesel** in city vehicles.

Nick Zorn, manager of the state farmer's market in Montgomery, said the cooking oil would otherwise end up in the city's sewer system or in its landfill.

"We're taking it and recycling it," he said.

Critics, however, caution against the rush to move from fossil fuels to biofuels. Two studies released last week, including one by The Nature Conservancy and the University of Minnesota, raised concerns about the true environmental impact of moving from fossil fuels like oil, coal and natural gas to biofuels such as ethanol and **biodiesel**.

Biofuels, researchers found, could actually create more carbon dioxide emissions and increase global warming -- which is one of the main reasons environmentalists have pushed for more eco-friendly fuels. The studies anticipate more land would be cleared around the world to plant the corn, soy and other crops needed to produce all the fuel demanded by consumers. Such changes in land use could lead to higher carbon dioxide emissions.

There are also concerns about the impact on food crops if farmers dedicate more land to fuel crops. Just as higher costs of oil can impact the price of food, so can the competition for land to grow crops for fuel versus food.

Farmers may have new options with alternative fuels The Dothan Eagle (Alabama) February 13, 2008 Wednesday

The National Peanut Research Laboratory in Dawson, Ga., is in its second year studying peanuts as a source for **biodiesel**.

The United States is a net importer of peanut oil, bringing in 150 million pounds of it each year, said Marshall Lamb, the laboratory's research leader. The laboratory has found certain peanuts are better for **biodiesel** than others. The Georganic peanut, for example, produces 120 gallons of oil per acre and costs \$1.75 per gallon to grow. And the U.S. Department of Agriculture provides credits for farmers who grow crops for biofuel.

Peanuts used for fuel don't require the care -- such as pesticides -- that edible peanuts require, Lamb said.

"We're not after making edible peanuts; we're not after competing with edible peanuts," he said.

Glen Zorn, deputy commissioner with the Alabama Department of Agriculture and Industries, said biofuels mean the opportunity to use alternative fuels and give farmers another outlet for their crops.

As far as ethanol is concerned, Glen Zorn said timber could be a source for cellulose ethanol in Alabama. And he said partnerships like the one with Montgomery show how biofuels can work on local levels.

"We're actually educating the public on what we can do with what we have," Glen Zorn said. " ... I'm the most optimistic I've been about agriculture in some time because I do see some options out there, and those options are in alternative fuels."

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**LOAD-DATE:** February 13, 2008

**LANGUAGE:** ENGLISH

**ACC-NO:** 20080213-DO-Farmers-may-have-new-options-with-alternative-fuels-0213

**PUBLICATION-TYPE:** Newspaper

**JOURNAL-CODE:** DO

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US States News

February 13, 2008 Wednesday 9:00 PM EST

## POPULAR SCIENCE MAGAZINE NAMES BOSTON THIRD GREENEST CITY IN NATION

**BYLINE:** US States News**DATELINE:** BOSTON

The city of Boston issued the following press release:

While spotlighting the 50 most innovative cities in the U.S., the March issue of Popular Science names Boston the 3rd "greenest city in America" behind San Francisco and Portland, OR. This recognition honors not only Mayor Menino's dedication to making Boston greener, but the work of his entire administration for their creative and important work to better our environment.

"We've already made Boston a leader on climate change issues and this acknowledgment only inspires us further to be number 1 when it comes to being green," Mayor Menino said. "Beantown truly is Greentown. Being green helps us build a better city and improve our economy at the same time. The success of Boston depends on us making the City greener."

**Mayor Menino has been increasing Boston's green status with a variety of moves over the past several years, particularly in the areas of green building and renewable energy. Boston became the first city in the nation to implement green building zoning, requiring large private development to meet the U.S. Green Building Council's LEED standards at a "certifiable" level. The City is also the largest municipal purchaser of renewable energy and biodiesel in New England. Boston has been recognized as the "7th Most Sustainable City" in the nation by SustainLane, a national organization dedicated to promoting best practices in environmental sustainability.**

Last April, Mayor Menino announced a sweeping series of new initiatives to further reduce Boston's emissions that include:

- \* Designing and implementing programs to increase recycling of all materials by 10% by 2012;
- \* Plans to plant 100,000 trees in the City by 2020;
- \* Establishing a "Climate Action Advisory Panel"
- \* Evaluating the feasibility of installing solar, wind, combined heat and power, and green roof installations;
- \* Require all new construction and major renovation of City facilities to obtain Leadership in Energy and Environmental Design (LEED) Silver certification;
- \* Requiring municipal departments to include a minimum of 11.7% of power generated from renewable resources and that by 2012 at least 15% come from renewable sources.

"This is a terrific recognition of Mayor Menino's leadership in this area. He has made Boston a great example of what cities and towns can do when they are creative," James W. Hunt, III, the City's Chief of Environment and Energy said. "The City's work to increase efficiency and innovation not only benefits Boston, but the entire community."

Popular Science used raw data from the U.S. Census Bureau and the National Geographic Society's Green Guide, which collected survey data and government statistics for American cities of over 100,000 people in more than 30 categories. The magazine compiled these statistics into four broad categories (Electricity, Transportation, Green Living and Recycling/Green Perspective), and scored points accordingly. More information can be found at [www.popsci.com/greencities](http://www.popsci.com/greencities).

Beacon, Metalico Biofuel Affiliate, to Acquire Biodiesel Facility Business Wire February 12, 2008 Tuesday 6:50 PM GMT

Business Wire

February 12, 2008 Tuesday 6:50 PM GMT

## Beacon, Metalico Biofuel Affiliate, to Acquire **Biodiesel** Facility

**DATELINE:** CRANFORD, N.J.

Metalico, Inc. (AMEX: MEA) today announced that its biofuel affiliate, Beacon Energy Corp. has entered into an agreement to purchase substantially all of the operating assets of Smithfield BioEnergy LLC, an affiliate of Smithfield Foods, for an undisclosed price.

Beacon, formerly known as AgriFuel Co., is an emerging producer and investor in the developing biofuels sector. Metalico, a leading scrap metal recycler and lead products fabricator, owns approximately 47% of Beacon's outstanding stock with the remaining shares of Beacon held by private investors.

The Smithfield BioEnergy assets principally consist of an operating **biodiesel** plant with a production capacity of 12 million gallons per year located in Cleburne, Texas, and associated equipment. The plant utilizes unique state-of-the-art proprietary technology and specializes in the processing of animal fats and other secondary feedstocks. Beacon intends to retain all Smithfield BioEnergy personnel currently associated with the plant's operations and business.

Beacon expects to finance the purchases through available cash and proceeds of a private equity placement.

Biofuels are alternatives to petroleum-based energy sources made from natural and renewable resources like soybeans and other oil-producing plant materials and animal wastes and byproducts. Beacon focuses on **biodiesel** within the market for biofuels. **Biodiesel** is an alternative to various oil distillate products, including diesel and certain home heating oils, that can be used in a variety of diesel engines and home heating systems.

Carlos E. Agüero, Chairman of both Beacon and Metalico and a Beacon stockholder, commented, "With the signing of this acquisition, we take a further step in Beacon's development. We continue to explore a number of additional opportunities to invest in or outright acquire already constructed and operating **biodiesel** production facilities that meet our strategic objectives."

"The emerging **biodiesel** industry is being adversely impacted by the high cost of feedstock relative to the selling price of finished product," he continued. "We believe these conditions will provide further acquisition opportunities and allow Beacon to cautiously accelerate our participation in the industry."

"However, our ability to successfully capitalize on these opportunities will be directly related to finding quality operations at compelling valuations and securing the sufficient debt and equity resources to consummate the transactions."

The transaction is subject to the satisfaction of customary conditions but is expected to close by the end of the first quarter. Notwithstanding, there can be no assurance that the conditions to closing will be met or that the transaction will be consummated in the first quarter or at all.

Calyon Securities (USA) Inc. acted as financial advisor to Smithfield Foods in the transaction. Beacon is handling the transaction internally.

Metalico, Inc. is a rapidly growing holding company with estimated annual revenues of approximately \$500 million through two principal business segments: ferrous and non-ferrous scrap metal recycling, and fabrication of lead-based products. Metalico now operates thirteen recycling facilities in New York, Pennsylvania, Ohio, New Jersey, Texas, and Mississippi and five lead fabrication plants in Alabama, Illinois, Nevada, and California.

Consistent with Metalico's overall green initiative, Metalico buys 50% of its electricity for its New York and New Jersey locations from regional wind farms that generate power from windmills and utilizes a blend of **biodiesel** and conventional diesel fuels in its New York diesel vehicle and equipment fleet. As a recycler of metals, the company is

Beacon, Metalico Biofuel Affiliate, to Acquire Biodiesel Facility Business Wire February 12, 2008 Tuesday 6:50 PM GMT

first and foremost in the resource recycling and conservation business. Metalico's common stock is traded on the American Stock Exchange under the symbol MEA.

Calyon Securities (USA) Inc., a subsidiary of Calyon, is a global full service institutional and self-clearing broker-dealer. It is a member of the NYSE, NASD, and ISE as well as all major global clearing organizations.

#### Forward-looking Statements

This news release contains "forward-looking statements" made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include statements with respect to the closing of the acquisition of Smithfield Bioenergy, as well as Beacon's and Metalico's beliefs, plans, objectives, goals, expectations, anticipations, assumptions, estimates, intentions, and future performance, and involve known and unknown risks, uncertainties and other factors, which may be beyond Beacon's or Metalico's control, and which may cause Beacon's and/or Metalico's actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be forward-looking statements. Neither Beacon nor Metalico assumes any obligation to update the information contained in this news release.

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**URL:** <http://www.businesswire.com>

**LOAD-DATE:** February 13, 2008

**LANGUAGE:** ENGLISH

**DISTRIBUTION:** Business Editors; Energy Editors

**PUBLICATION-TYPE:** Newswire

Global Clean Energy Holdings Delivers First Test Shipment of Crude Jatropha Oil to Allegro Biodiesel Business Wire  
February 12, 2008 Tuesday 1:01 PM GMT

Business Wire

February 12, 2008 Tuesday 1:01 PM GMT

## Global Clean Energy Holdings Delivers First Test Shipment of Crude Jatropha Oil to Allegro **Biodiesel**

**LENGTH:** 1248 words

**DATELINE:** LOS ANGELES

Global Clean Energy Holdings, Inc. (**OTC: MLSC**) has delivered its first test shipment of Crude Jatropha Oil to Allegro **Biodiesel** Corporation's **biodiesel** production facility in Pollock Louisiana for processing into **biodiesel** fuel. Global Clean Energy Holdings is developing Jatropha plantations in Latin America. The two companies have entered into a testing and processing agreement to convert Jatropha Oil into **biodiesel** fuel that meets all relevant ASTM and EU specifications.

"This is a very strategic agreement with Allegro. They are a very well respected processor and distributor of Specification Grade **biodiesel** and have considerable experience in utilizing a wide range of different feedstocks in their production process. They are logistically well located in Louisiana and can accept large shipments of Jatropha oil from us through various Gulf of Mexico ports," said Richard Palmer, Global Clean Energy's President and Chief Executive Officer.

The processing agreement provides for Global Clean Energy to ship Crude Jatropha Oil (CJO) to Allegro, and for Allegro to perform a full battery of tests on the raw feedstock in its Pollock, Louisiana, laboratory, process the Jatropha oil into **biodiesel**, and test the finished product to ensure it meets current standards. It will also send product samples out to accredited laboratories for a full series of ASTM testing. The feedstock and processed **biodiesel** will be further evaluated for direct processing in Allegro's facility along with its ability to blend with other feedstocks including RBD Soy, Crude Degummed Soy and others, a strategy designed to reduce Allegro's overall future production costs and improve its profit margins, while providing Global Clean Energy Holdings with access to the US **biodiesel** market.

"Since we began operating our plant in April 2006, Allegro has been a pioneer in the **biodiesel** industry," said Bruce Comer, CEO of Allegro. "The recent Energy Bill mandates greater development of biofuel resources at a time when competition for feedstock has increased key commodity prices. Jatropha oil and other alternative feedstock choices represent the next chapter in **biodiesel** fuel production. We are very excited about the potential for Jatropha oil from Global Clean Energy to reduce our overall production costs. Given recent price spikes for soy, canola and palm as **biodiesel** feedstock, we believe alternate non-food based feedstocks will be essential to growth in the **biodiesel** industry. Jatropha oil has very good qualities that makes it a good **biodiesel** feedstock source. We are confident that Jatropha oil will blend well with other feedstocks to produce a high grade **biodiesel** while addressing the on-going concern of utilizing food for fuel."

Jatropha oil is derived from the *Jatropha curcas* plant. The plant is a perennial plant which can live for over 30 years, and produces high quality inedible seed oil. The plant grows in marginal soils that may not be suitable for food production, and is drought and pest resilient, making it an attractive alternative to more costly and production limited edible feedstocks which must be replanted every year. The seeds of the plant yields 32% to 37% oil by weight compared to other common feedstocks such as soybeans, which yield 18% to 22%.

Jatropha has added virtues as a more environmentally friendly and efficient feedstock compared to expensive food based commodities. Per hectare, Jatropha can yield between 2.0 to 3.0 tons of oil whereas soybeans yield 1.2 to 1.5 tons, offering improved finished **biodiesel** output per acre of feedstock farmed. As an oil producing tree, Jatropha may qualify for various carbon credits under the Kyoto protocol, for additional profit potential to growers.

About Global Clean Energy Holdings

Global Clean Energy Holdings Delivers First Test Shipment of Crude Jatropha Oil to Allegro Biodiesel Business Wire  
February 12, 2008 Tuesday 1:01 PM GMT

Global Clean Energy Holdings, Inc. is an emerging renewable energy company focused on the production of feedstocks used for the production of biofuels. The company is divesting itself of its remaining legacy biopharmaceutical assets, has already changed its corporate name from Medical Discoveries, Inc. and has submitted its application for a new ticker symbol to reflect its new focus on the biofuels feedstock (alternative energy) market. The company is fully reporting and has applied to re-list its shares of common stock on the Over-the-Counter Bulletin Board. More information regarding Global Clean Energy Holdings, Inc. can be found at [www.gceholdings.com](http://www.gceholdings.com).

#### About Allegro **Biodiesel** Corporation

Allegro **Biodiesel** Corporation is a producer and distributor of **biodiesel** fuel. Allegro operates a production facility located in Pollock, Louisiana that uses renewable agricultural-based feedstock to produce **biodiesel**. Allegro began sales in April 2006, becoming the first operational **biodiesel** producer in the state of Louisiana.

#### Caution Regarding Forward-Looking Statements

Any statements in this press release about Global Clean Energy Holdings expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995 (the "Act"). These statements are often, but not always, made through the use of words or phrases such as "believe," "feel", "will," "expect," "anticipate," "estimate," "intend," "plan," "forecast," "could," and "would". Examples of such forward looking statements include statements regarding the timing, design, scope, and anticipated results of its efforts to plant, harvest, and commercialize feedstock oil from Jatropha curcas in Mexico. Global Clean Energy Holdings bases these forward-looking statements on current expectations about future events. They involve known and unknown risks, uncertainties and assumptions that may cause actual results, levels of activity, performance or achievements to differ materially from those expressed or implied by any forward-looking statement. Some of the risks, uncertainties and assumptions that could cause actual results to differ materially from estimates or projections in the forward-looking statement include, but are not limited to, the risk that we might not be able to raise sufficient funds to develop the Jatropha plantations in Mexico, that we may face delays or other difficulties in acquiring and cultivating Jatropha farm lands in Mexico, that we may not be able to successfully commercialize Jatropha oil as expected, that the market for our Jatropha products will not grow as expected, and the risk that the Mexican Jatropha project will not achieve expectations because of the risks normally associated with creating a new business in a new market. For additional information about risks and uncertainties Global Clean Energy Holdings faces, see documents Global Clean Energy Holdings and Medical Discoveries files with the SEC, including report on Form 8-K filed September 17, 2007 concerning the acquisition of the alternative-energy feedstock assets from Global Clean Energy Holdings LLC and its filed Form 10-KSB for the period ended December 31, 2006. Global Clean Energy Holdings and Medical Discoveries claims the protection of the safe harbor for forward-looking statements under the Act, and assumes no obligation and expressly disclaims any duty to update any forward-looking statement to reflect events or circumstances after the date of this news release or to reflect the occurrence of subsequent events.

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URL: <http://www.businesswire.com>

LOAD-DATE: February 13, 2008

LANGUAGE: ENGLISH

DISTRIBUTION: Business Editors; Energy Editors

PUBLICATION-TYPE: Newswire

Proposed tank farm halted during appeal of permit; Environmental group challenges DEQ's OK Times-Picayune (New Orleans) February 12, 2008 Tuesday

Proposed tank farm halted during appeal of permit; Environmental group challenges DEQ's OK Times-Picayune (New Orleans) February 12, 2008 Tuesday

Times-Picayune (New Orleans)

February 12, 2008 Tuesday

## Proposed tank farm halted during appeal of permit; Environmental group challenges DEQ's OK

**BYLINE:** By Victoria St. Martin, River Parishes bureau

**SECTION:** METRO; Pg. 1

**LENGTH:** 750 words

An environmental group has brought a halt to construction on a proposed tank farm in Mount Airy after filing a suit appealing the state Department of Environmental Quality's decision to issue air and water permits for the project.

The project's owners suspended work after the appeal was filed last week in East Baton Rouge Parish district court by Garyville attorney Geri Broussard Baloney. The suit argues that the permits were issued without regard to public safety, that the DEQ relied on the company's environmental impact analysis and that the company did not seek alternative sites.

Broussard Baloney was unavailable for comment Monday.

Tank farm representatives, whose air and water permits were issued Jan. 3, were unavailable for comment Monday.

Buddy Boe, a spokesman for St. John the Baptist Parish, said the company had planned to begin construction this week. The company voluntarily put those plans on hold after the appeal was filed, he said.

Boe said there is a 30-day window to appeal a DEQ permit, and that the appeal process can take up to 90 days.

A neighborhood group has opposed the tank farm since its conception because of environmental concerns.

The Angelina Tank Farm was proposed by Safeland Storage LLC of Lafayette on 435 acres between the Mississippi River and Airline Highway. It would have 63 storage tanks for crude oil, petroleum products and **biodiesel** ingredients.

Cheryl Nolan, a DEQ representative in the permitting office, said the company used a computer-engineered model to perform an environmental assessment, even though it was not required because of the facility's size. The assessment showed no impact beyond the fence line, she said.

Save Our Neighborhood representatives have been requesting an independent study from parish leaders.

Parish Attorney Jeff Perilloux advised council members against taking action following a special meeting on Jan. 29. The meeting was called after Save Our Neighborhood representatives collected the 50 signatures required by the home rule charter to call a public hearing.

Council member Charles Julien, after listening to residents' concerns and requests for an independent environmental study, made a motion in favor of them.

His motion died because no other council members supported it.

"My job is to protect St. John," Julien said after the meeting. "An independent study could clear up some questions for me. I need data."

Perilloux said last week that he plans to gather information from the DEQ and forward it to council members. He said the parish defers permitting to the DEQ, and the permitting process has run its course.

"The council has addressed the concerns of residents on many occasions," Perilloux said.

But Save Our Neighborhood members say they are not being heard by the council.

"We had to force them to have a meeting, and the results are still the same," said Carl Monica, a plaintiff in the appeal. "We've done everything we can to help get this issue to the forefront. All we are saying is, can the parish tell us we are safe."

Loretta Tassin, a 40-year resident of Mount Airy, has one of the few houses on Chestnut Street with a sign protesting the tank farm.

She said she put the sign up a few years ago, when she first heard talk of the proposed tank farm, which will nearly sit in her backyard.

Tassin said she believes that Mount Airy, a small community of four streets located on the upriver end of the parish's east bank, is being used as a dumping ground. She fears that the tank farm will release dangerous chemicals into the air.

"They think it will be met with the least resistance, so anything that's undesirable, they come and dump it here," Tassin said. "We should be able to breathe fresh air and have clean communities. We pay taxes just like everyone else."

A throat cancer survivor, Larry Brown, 53, of Mount Airy, said he can already taste a change in his drinking water although the land has yet to be cleared. But with the tank farm coming close to his Daffodil Street home, Brown said he just wants one thing: to leave.

"I think the politicians sold us out," Brown said. "They can buy us out and let us move, because right now we are sandwiched between industry. They store a lot of dangerous chemicals and they can explode. I'd like to buy me a little place on the water and fish every day."

He said he doesn't believe the tank farm will bring good things to St. John.

"Not for the living," he said.

.....

Victoria St. Martin can be reached at vstmartin@timespicayune.com or at (985) 652-0952.

**LOAD-DATE:** February 12, 2008

**LANGUAGE:** ENGLISH

**GRAPHIC:** STAFF PHOTOS BY BRETT DUKE

Mount Airy resident Larry Brown, 53, mowing his yard Monday, lives only blocks from a proposed tank farm. 'I think the politicians sold us out,' Brown said. 'They can buy us out and let us move, because right now we are sandwiched between industry. They store a lot of dangerous chemicals and they can explode.' [3861034]

A sign at her house tells how Mount Airy resident Loretta Tassin feels about a proposed tank farm near her backyard. 'We should be able to breathe fresh air and have clean communities. We pay taxes just like everyone else,' she says. [3861032]

**PUBLICATION-TYPE:** Newspaper

ALABAMA AGRICULTURE AND INDUSTRIES COMMISSIONER SPARKS AND MONTGOMERY MAYOR  
BRIGHT OPEN NEWLY CONSTRUCTED BIODIESEL FACILITY US States News February 12, 2008 Tuesday 2:18  
AM EST

US States News

February 12, 2008 Tuesday 2:18 AM EST

## ALABAMA AGRICULTURE AND INDUSTRIES COMMISSIONER SPARKS AND MONTGOMERY MAYOR BRIGHT OPEN NEWLY CONSTRUCTED **BIODIESEL** FACILITY

**BYLINE:** US States News

**DATELINE:** MONTGOMERY, Ala.

The Alabama Department of Agriculture and Industries issued the following news release:

Agriculture & Industries Commissioner Ron Sparks and Montgomery's Mayor Bobby Bright announced a partnership to turn used cooking oils into **biodiesel** fuel for City vehicles last fall. Today was the grand opening of the newly constructed Center for Alternative Fuels **Biodiesel** Production facility. Several government officials were on hand to participate in the ribbon cutting ceremony including Rep. Marc Keahey, Rep. Steve Hurst and Montgomery City Council Rep. Martha Robie.

"This has truly been a special day for the City of Montgomery in opening our newly built **biodiesel** facility," I can not think of a better way to help clean up our environment and fuel our vehicles and farm equipment," said Commissioner Sparks.

"Reducing the amount of used cooking oils that goes into the landfill is good environmental policy," Mayor Bright said "This process is working in several other cities across the state and we are extremely pleased that we can put this into action for Montgomery's citizens."

Commissioner Sparks says the facility will also be used for instructional purposes to encourage the state's farmers to produce a variety of crops that can be turned into **biodiesel**, including soybeans and canola. Approximately 110 gallons of B100 will be produced every day. Expected cost of the **biodiesel** should average between 75 cents and 1.00 dollar per gallon.

For more information about the Center for Alternative Fuels **Biodiesel** Production facility contact Deputy Commissioner Glen Zorn, director, Center for Alternative Fuels at 334-240-7287.

**LOAD-DATE:** February 14, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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The Associated Press State & Local Wire

February 12, 2008 Tuesday 4:43 AM GMT

## Delaware company proposes Fulton County **biodiesel** refinery

**SECTION:** STATE AND REGIONAL

**DATELINE:** ROCHESTER Ind.

A Delaware company wants to build a **biodiesel** refinery on a 32-acre site in Fulton County just east of another area that has already been rezoned for a proposed ethanol plant.

The rezoning request by Green Fuels LLC is scheduled to be heard Feb. 25 at a meeting of the Fulton County Area Plan Commission. The plant eventually would produce 20 million gallons of **biodiesel** fuel a year and employ 15 to 18 people, said Shane Blair, executive director of the Fulton Economic Development Corp.

Blair said Green Fuels has secured an option on the property owned by Jimmy and Suzanne Swan at the southwest corner of Indiana 110 and County Road 200 East and expects to close on its financing before July.

Indiana Renewable Fuels also has proposed an ethanol plant near the Green Fuels site and the County Line Land-fill.

Information from: The Rochester Sentinel, <http://www.rochsent.com>

**LOAD-DATE:** February 12, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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The Associated Press State & Local Wire

February 12, 2008 Tuesday 3:12 PM GMT

## Soybean crushing plant, **biodiesel** facility planned

**SECTION:** STATE AND REGIONAL

**LENGTH:** 79 words

**DATELINE:** KINDRED N.D.

A group of farmers is planning a multimillion dollar soybean crushing and **biodiesel** plant in the Kindred area.

Organizer Dale Beck says the Ag Plus facility will use up to 42 million bushels of soybeans a year, and cost up to 200 million dollars to build.

Beck says the cooperative will be kicking off a membership drive Wednesday at the Northern Bean Expo in Fargo. Plans are to have the plant operating by the summer of 2010.

Information from: Don Haney/KFGO-AM, <http://kfgo.com>

**LOAD-DATE:** February 13, 2008

**LANGUAGE:** ENGLISH

**PUBLICATION-TYPE:** Newswire

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