

Plant Power Can Solve Fuel Problem

A car fuelled by plant oil, which backers hope will reduce Indonesia's spending on subsidizing fuel for the population, has completed a 3,200 km trip across the country.

The vehicle fuelled with oil from the jatropha plant traveled from Atambua in West Timor to the Indonesian capital, Jakarta.

Tanto Bangun, editor of Indonesia's National Geographic magazine, one of the major sponsors of the trip, said he was not sure that the Mitsubishi Strada would survive the journey across the freezing volcanic peaks of Flores and Sumbawa islands, and the sweltering Javanese countryside.

The trip was the brainchild of Bangun and Robert Manurung, head of the biotechnology research centre at the Bandung Institute of Technology, Aljazeera.com said.

Bangun said: "When I met Robert Manurung, he was talking about how he is concerned about the lack of research on alternative energy [in Indonesia]... Innovation is not really appreciated because many industries that are related to fossil fuels don't like this development."

"So I challenged him: Can we make a journey on pure jatropha oil?"

Jatropha plant
"Maybe this is the world's first pure biodiesel-run car. Definitely, it's Indonesia's first"

Head of the biotechnology research center at the Bandung Institute of Technology

Manurung, who has spent several years looking into refining oil from the bushy jatropha plant and developing a converter to allow the oil to withstand extremes of temperature, has high hopes for the innovative car.

Indonesia is trying to reduce the cost of providing subsidized fuel to the population, which has risen to an estimated 62.4 trillion rupiah (\$6.86 billion) this year, despite several cuts to subsidies by the cash-strapped government.

Although rich in fossil fuels, Indonesia realizes it does not have an endless supply, says Al Hilal Hamdi, who was appointed to head a government team examining biofuel development this year.

Energy Security
"The government would like to have more energy security because we have limited fossil fuels. We have only 23 to 25 years of oil, 60 years of gas, and 150 years of coal," says Hamdi.

"Biofuel will secure our energy sources," he added.

Jakarta plans to make at least five million



Indonesia government hopes that biofuels will supply 10 percent of the country's transport and electricity fuel needs by 2010. (WNN.com Photo)

hectares (12 million acres) of former forest land available for palm oil, jatropha, sugarcane and cassava plantations in a bid to create jobs for up to three million people, Hamdi said.

The government hopes that biofuels will supply 10 percent of Indonesia's transport and electricity fuel needs by 2010.

Environmentalists have applauded Jakarta's plans for alternative energy sources but warned that palm oil was not necessarily a green answer to Indonesia's fuel crisis. "If the government really wants to press for biofuel, please use idle land, don't convert natural forest," urged Elifian Effendi from Greenomics.

Palm oil
Palm oil, which requires fertile land, uses valuable food-producing land, but jatropha, said Manurung,

can grow on dry waste-land. Jatropha is ideal for the drought-prone regions of eastern Indonesia which struggle to grow other crops, and establishing a jatropha plantation costs just a tenth of setting up a palm oil plantation.

Although demand for biofuels is likely to soar, vegetable oils are not about to replace petrol as Indonesia's, or the world's, major fuel source, warns David Chang, a researcher from UOBKay Hian Securities. Palm oil production from Malaysia and Indonesia, which together supply 90 percent of global palm oil, provides the equivalent of only about three percent of the current demand for fossil fuels. And Indonesia, which currently supplies half of the world's crude palm oil, will struggle to supply even the food industry over the coming years, he said.

To Buy or Not to Buy?

About 30 companies have raised billions of dollars in capital so far this year and the initial public offering pipeline is pouring forth more deals from a variety of sectors.

Mainland banks, in particular, have caught the eye of retail investors. But how do you separate the wheat from the chaff? Brokers, it appears, are warning to companies with healthy balance sheets and future growth prospects. MondayMoney sought brokers' insights into two upcoming share sales—China BlueChemical and SPG Land.

China BlueChemical
The latest spin-off by CNOOC (0883), China's largest offshore oil producer, China BlueChemical has attracted the strongest attention. The company is one of the largest and most efficient nitrogenous fertilizer producers in terms of production volume and energy consumption, respectively, in the mainland.

The core business is production and sale of urea. It uses natural gas in the production process and this accounts for about 60 percent of total production cost.

One of the major advantages the company has is the long-term contracts with the parent for supply of natural gas, which helps to keep costs 20 percent lower than competitors. Thestandard.com reported.

Prudential Brokerage associate director

Kingston Lin King-ham said CBC is a quality stock with solid earnings and the backing of its parent. Central government policies favor the agricultural sector and should benefit the company.

Last year, the company acquired a 90 percent stake in Tianye Chemical in Inner Mongolia, increasing production capacity of urea by 520,000 tons to 1.84 million tons a year. The unit started to provide profit contribution in the first quarter of the year ended March 31. Acquisitions and capacity expansion drove first half net profit up by 148 percent. Net profit for the full year, last year, was up 31 percent to 944 million yuan (HK\$928 million). The company forecasts full year profit to rise by 55 percent to 1.46 billion yuan.

Hainan province-based CBC is expanding into high value-added products such as methanol, which it says will be the key sales driver. A methanol plant has been built in Hainan in partnership with Kingboard Chemical (0148), adding an annual capacity of 600,000 tons.

"The joint-venture with Kingboard to produce methanol will provide earnings momentum, while strategic investors can have a stabilization effect on the stock price," said Kenny Tang Sing-hing, associate director of Tung Tai Securities.

Norwegian fertilizer company Yara has locked up 10 percent of the new shares for between 18



Gnoco is one of the largest and most efficient nitrogenous fertilizer producers in terms of production volume and energy consumption respectively. (Thestandard.com Photo)

months and 3 years, while 28 percent of the issue is being offered to institutions, including Chinese Estates (0127), Bank of China Investment, Cinda Investment, and Henderson Land (0012), with a lock-up period of 6 to 9 months.

Many analysts believe this is a good medium-to-long-term investment. Tanrich Securities director Patrick Pun Tit-shan said: "Its price-earnings ratio of 9.7 times is not expensive. If the stock rises by less than 10 percent from its offer price, investors can buy in for the medium-to-long term."

SPG Land

This is a mainland developer wholly-owned by Starwaly Properties of Australia, and is engaged in building and selling residential property in Shanghai, mainly for middle and high-end buyers.

Six property projects are under development in Shanghai and one is in Huangshan. The compa-

ny has a land bank of 3 million square meters, adequate for 3 to 5 years of development.

Net profit was 261 million yuan last year, up 150 percent from a year earlier. The company forecasts net profit will rise 39 percent to 365 million yuan in 2006 and 46 percent to 533 million yuan in 2007.

The developer is diversifying into hotel projects, including the Peninsula Shanghai jointly-built with Hongkong and Shanghai Hotels (0045), owner of Peninsula Hotels. It plans to invest more than 2 billion yuan on three hotels. Tanrich's Pun and Prudential's Lin both say SPG Land is more attractive than Shui On Land, also due to list soon.

"The quality of the stock and the upside potential of the price are better than those of Shui On Land. Its price-to-earnings of around 13 times is also cheaper than that of Shui On Land," says Lin. Shui On Land's PE is about 15 times.

Converting Gas/Coal to Oil

You are going to hear a lot about gas/coal to liquids technology in Australia in coming years and it could very well end up supplanting the likes of ethanol and biodiesel as a source of energy in competition with oil.

South Africa has used it for years (Sasol), the Germans used similar technology during World War Two and intensive studies are being made to use it in the Middle East, the US and even Australia's north west shelf.

The Victorian Government has just given the greenlight to a 50-year mining license for a \$5 billion joint project by Shell Oil Group and Anglo American to convert Latrobe Valley brown coal into diesel fuel.

This is more like the processes used by the South African company, Sasol (Anglo American is a South African mining giant now based in London). It will use Shell technology.

Latrobe Valley brown coal is currently used to generate power from a complex of power stations.

The Victorian Government's approval requires the project to capture and store underground—a process known as geosequestra-

tion—carbon dioxide produced during the process, according to Yahoo.com.

Coinciding with the license approval to the operator, Monash Energy, Shell Gas and Power and Anglo American also signed a joint development agreement to advance the project.

The Monash Energy plant is forecast to produce 60,000 barrels of synthetic diesel daily when it comes on stream by the middle of the next decade.

The statement from the two companies said: "Shell Energy Investments Australia Pty Ltd (Shell) and Anglo American plc announced the signing of a joint development agreement (JDA) for the two companies to further advance the Monash Energy clean coal-to-liquids project in the state of Victoria, Australia. This agreement is the first under a clean coal energy alliance formed by Shell and Anglo American in May 2006.

"The JDA covers a number of project development phases. In the initial concept phase, which is expected to conclude during 2007, Monash Energy in conjunction with technical advisers from Anglo American and Shell will carry out a study of the

commercial and technical aspects, including carbon capture and storage. If successfully concluded, the study would form the basis for the feasibility phase and demonstration activities.

"The Monash Energy project would involve the gasification—via Shell's proprietary coal gasification process—of Anglo American's brown coal from Victoria's Latrobe Valley for further conversion into fuels, including virtually zero sulfur, synthetic diesel, using Shell's proprietary gas-to-liquids technology. A number of locations have been identified as potential sites for the storage of CO₂ from the process."

These potential storage sites for the carbon dioxide have been located already, including in the Bass Strait gas fields which lie at the end of the rock formations in the Latrobe Valley brown coal is found.

The synthetic diesel, said to be of a higher and cleaner quality because it contains fewer impurities including almost no sulfur, will not necessarily be sold in the state.

Shell is investing \$US 6 billion in gas to liquids technologies over 10 years with four

plants. It announced in October 2000, agreement with the Egyptian government for a 75,000 barrels a day (3.8 million tonnes per annum) facility and a similar plant for Trinidad & Tobago.

In April 2001, it announced interest for plants in Australia, Argentina and Malaysia at 75,000 barrels a day costing \$US 1.6 billion. But the Shell project and a number of others slated for Western Australia have been withdrawn or deferred. Shell now says Australia ranks well behind the Qatar project in the Middle East which will use gas from the world's biggest gas field.

In background material on the various company websites it was explained that Anglo Coal is a member of the FutureGen Industrial Alliance, a public-private partnership involving the US Department of Energy that aims to build a near zero emission coal-fired power plant employing carbon capture and storage technology.

Anglo Coal Australia participates in the Coal21 Fund, established by the black coal mining industry to develop technologies for reducing greenhouse gas emissions from coal utilization.

US Will Host World's Largest Alternative Fuel Car Show

The City of Santa Monica has announced it will sponsor and host the most comprehensive, technologically advanced exposition of alternative fuel and high MPG vehicles ever held. AltCar Expo, specifically designed for the public, will take place on December 9 and 10, 2006. Admission to the Expo, as well as a wide-ranging selection of seminars and advanced technology displays, will be free. The event will be held at Barker Hangar, located at the Santa Monica Air Center.

Over 100 alternative fuel and high MPG vehicles will be showcased at the event. Vehicles and fuel types will include hybrid, electric, hydrogen, compressed natural gas, plug-in hybrid, high MPG gasoline, ethanol and biodiesel. Other eco-friendly vehicles on display will be electric bicycles, mopeds and two- and three-wheeled scooters.

A main feature of the event will be the "ride and drive," which will give the public an opportunity to try-out many of the vehicles on display, some of which will be available for immediate purchase. A key goal of AltCar Expo is showing consumers how they can save money and earn tax credits by going green. Theautochannel.com said.

A large involvement by celebrities, public officials and well-known environmentalists is expected throughout the two-day event, including such activities as the drive-on of the automobiles, buses, bicycles and scooters into Barker Hangar, and the opening ceremony, which will hold a few surprises.

Public transit will also play a major role at AltCar Expo, with the latest in bus and light rail technologies, route information, urban planning and Metro expansion plans on display. Schools, businesses and individuals will also be invited to submit transportation-themed projects for display and recognition.

Craig Perkins, environmental and public works director for the City of Santa Monica, said AltCar Expo will give the public an outstanding opportunity to view the most comprehensive collection of clean-air, fuel-efficient vehicles available in the marketplace today. "The price of oil, national security, health concerns and environmental damage are all issues that need to be addressed now," said Perkins. "Making more fuel-efficient decisions ultimately helps everyone."

According to a recent Wall Street Journal/Harris Interactive poll, the public continues to show growing interest in alternative fuel vehicles. A third of Americans polled said they are seriously interested



Groundbreaking AltCar Expo to showcase never-before-seen vehicles and feature ride-and-drive opportunities for the public. (Theautochannel.com Photo)

in buying or leasing such a vehicle, and a full 92% said they would be willing to pay more for one over a traditional gasoline-powered car. Top reasons cited included concerns over damage to the environment from fossil fuels and the high cost of gasoline. Eight million alternative fuel vehicles are now on the road in the U.S., more than double the number in 2000.

Among the companies scheduled to exhibit at AltCar Expo are American Honda Motor Company, which will showcase its natural gas-powered Civic GX, Tesla Motors, maker of a high-performance electric sports car, Toyota, Zap, Segway, Loroué Electronics, AC Propulsion, Miles Automotive, Clean Energy, and Feel Good Cars Corporation, which makes a zero-emissions vehicle.

Santa Monica's Big Blue Bus will operate free shuttles from the Los Angeles Convention Center to the AltCar event to give visitors to the traditional auto show an opportunity to learn more about alternative transportation.

Event sponsors include Metro, Clean Cities, the Big Blue Bus, California Fuel Cell Partnership, Coalition For Clean Air, Global Green, Union of Concerned Scientists, Physicians For Social Responsibility, L.A. Bike Coalition, Sustainable Works and Environment Now. Santa Monica, hosting city and a major sponsor of AltCar Expo, has a long history of successfully incorporating alternative fuel vehicles into its daily operations and participating in regional transportation planning efforts to promote sustainability.