

# Plenty to think about in biofuel production

Using food for fuel may not be without its hiccups, write **Paul Higgins** and **Sandy Teagle**.

RECENTLY biofuels such as biodiesel and ethanol have been touted as the solution to high petrol prices, greenhouse gas emissions and pollution from fossil-based fuels.

We believe that biofuels have a part to play in solving some of these problems, but there are significant risks to business models that have been proposed for biodiesel in Australia.

The production of biodiesel is a fairly simple chemical reaction involving the transformation of fats and oils into a liquid that can be used as a transport fuel.

Due to the fact that the process is a very simple one, the ranges of scale of production of biodiesel are quite large.

Biodiesel is being produced in backyard sheds from waste cooking oil, in small scale on farm plants from products such as canola, and in larger scale industrial plants from a variety of feed stocks.

This means that there are a multitude of possible business models for the production of biodiesel.

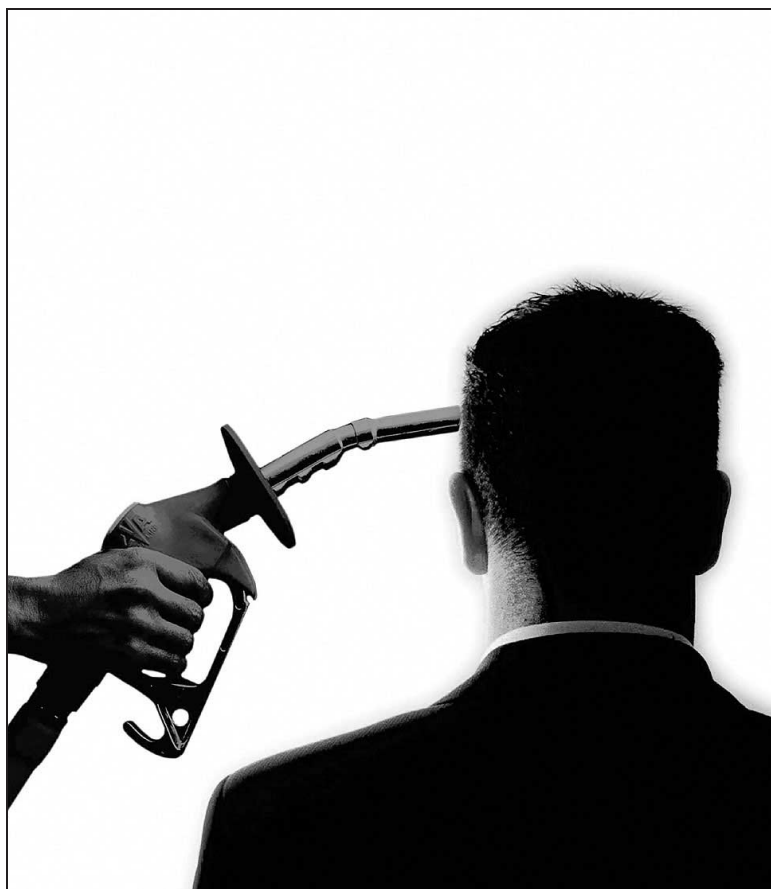
The three key issues for the success of the business models are the price of oil, the price of feed stocks for biodiesel production, and limits on feed stock availability.

In straight business terms biodiesel has to compete with oil as a transport fuel.

Until recently, large sections of the media were reporting that the price of oil would continue to rise.

In an article published seven weeks ago, we stated that it was likely oil would be below US\$40 a barrel some time in the next three years.

This statement was based on our view that, due to tightness of supply and demand, a large risk premium had been built into the market for



oil. We believe that risk will be reduced over the medium term, reducing the price of oil.

Since that article was published the oil price has fallen significantly.

This does not mean that we are right, but it does mean that scenarios of lower oil prices need to be factored into assessing the viability of biodiesel.

Low oil prices will wipe out high-cost biodiesel businesses.

Because the production of biodiesel is a relatively simple chemical process most of the production cost is in the cost of the feed stocks that are used.

Feed stocks can be up to 86 per cent of the final biodiesel cost. This means that the competitiveness of

biodiesel is highly reliant on the price of feed stocks.

If we are to produce significant volumes of biodiesel then the biodiesel industry will have to compete for land that produces food in order to obtain feed stocks.

In a country like Australia this is likely to be affected by drought conditions such as the ones that we are currently experiencing.

The combination of variable climate and competition for feed stocks means that the cost of production base in Australia is uncertain. This increases business risk.

Some people have pointed to the production of biodiesel from palm oil as a more reliable feed stock, and

countries such as Malaysia and Indonesia are allocating larger areas of their land to palm plantations.

There are serious questions to be asked about the sustainability of these changes to land use in those countries as large amounts of forest are changed into palm tree plantations.

At a global level there are significant structural barriers to the levels of biodiesel that we can produce.

For example, it has been estimated that if the USA converted all of its fat and oilseeds into biodiesel it would replace only 13.3 per cent of their current diesel consumption.

Far before production reaches these levels, competition for the land for these products would drive up the price of feed stocks and therefore drive up the cost of biodiesel.

People will want to eat more than they want to drive.

In our view biodiesel can play a part in substituting for oil-based transport fuels.

However, we believe the contribution will be limited by feed stock costs and the limitations of land use.

Investors and promoters of biodiesel businesses need to examine closely the risks involved with their business models.

In the US, Wal-Mart has announced that it is aiming to double the fuel efficiency of its new trucks by 2015.

Such improvements in fuel efficiency will have a much larger effect on reducing fuel costs, greenhouse gas emissions and pollution than substitution by biodiesel.

Both strategies should be pursued but we need to recognise that there are significant business risks in the production of biodiesel in Australia.

**Paul Higgins and Sandy Teagle are futurists with Emergent Futures. They are currently writing a book on the future of oil in Australia.**

## Strategy swayed by a pressure environment

**James Ryan** questions the state of development strategy in the Hunter.

ALMOST one year ago the NSW Planning Minister made the trip to Newcastle and released the draft Lower Hunter Regional Strategy for public exhibition.

The regional strategy was to be a breakthrough in planning. Instead of decisions made by poorly resourced local councils under heavy pressure from property development companies, a grander regional perspective would prevail.

Areas suitable for development over the next 25 years would be chosen on the basis of least environmental impact and greatest benefits to the community.

The Environment and Community Coalition of Hunter Organisations (ECCHO), representing more than 20 environment and community groups, has tracked the development of the regional strategy and made detailed submissions.

At that time in November last year community groups were disappointed. Too much bushland

would be cleared around Morrisset and Raymond Terrace and not enough of the proposed development areas were close to railway stations and therefore fuel efficient transport would be harder to provide.

A population growth figure over 25 years of 125,000 was adopted instead of the predicted 105,000.

We were also concerned that the Hunter was ageing faster than the Sydney average and by 2031 up to one-third of our population would be aged 65 and over.

This dramatic departure from the current age demographic would demand a new type of housing.

This week in cabinet the future development patterns of the Hunter Valley are likely to be decided. In contrast to our hopes that common sense and reason would prevail I suspect we will find that those same developers who lobbied local councils have now simply transferred their attentions to the State Government.

The large landholders have gained a special place at the table.

Rather than listen to our concerns about the influence of the property industry Planning Minister Frank Sartor has openly set out to do deals

with Coal & Allied and Hardie Holdings in return for those companies donating land to the public for conservation.

On the surface this may sound like a good strategy. In return for donating large amounts of land with little or no development potential it appears Coal & Allied are about to be granted far greater rights for development around Catherine Hill Bay, Gwandalan and the F3 Link Road than ever would have been contemplated in a plan based on community needs.

Rosecorp too will get development rights in return for donating land to the public as will Hardie Holdings.

In the early development of the regional strategy the Department of Planning assessed all possible locations for development in the Lower Hunter. The assessment took into account biodiversity, the cost to sewer and water each location, the proximity to schools, services and transport routes.

The methodology and results were obtained by environmentalists under Freedom of Information legislation.

Under this methodical and

objective assessment criteria the second worst location indicated for further residential development was identified as Catherine Hill Bay.

Under the same assessment the very worst area for development was the Hardie Holding's Sweetwater site near Branxton.

These are the exact areas we are now being told will be considered for inclusion in the strategy.

If this expected result occurs it will raise questions of how property development companies have so much influence they can convince the Government to make decisions that are plainly not in the interests of the community.

Our groups supported the regional strategy process on the basis it would deliver better decisions for the environment and local communities.

Undoubtedly more land, as National Park or Flora Reserve is an achievement for the environment and this should be acknowledged. But should the community have to suffer poorly located development to achieve this result?

**James Ryan is a Cessnock City Councillor and facilitator of ECCHO.**

### Topics today



#### Today's fact

Mosquitoes prefer blondes to brunettes.

#### Today's word

**Expunge** (ik-spunj): To strike out, erase, or mark for deletion.

#### It happened today

**From our files - 1961:** The first oval to be developed at the Newcastle International Sports Ground Centre at Broadmeadow will be able to seat 31,000.

#### Today in history

**1905:** Australian poet Dorothy McKellar's *My Country* is first published.

**1914:** Two crewmen of a German reconnaissance aircraft become the first to be killed in an air battle when their plane is shot down by a French aircraft.

**1947:** US President Truman delivers the first televised address from the White House.

**1962:** The Beatles' first hit, *Love Me Do*, is released in the United Kingdom.

**1969:** *Monty Python's Flying Circus* makes its debut on BBC-TV.

**1974:** Five people are killed and 35 injured by Irish nationalist guerrilla bombs in two bars in Guildford, England.

**1983:** Lech Walesa, leader of Poland's Solidarity labour movement, is named winner of Nobel Peace Prize.

**1987:** South Africa's president P.W. Botha says his government plans to permit some multiracial neighbourhoods.

**1999:** Two packed commuter trains collide near London's Paddington Station during the morning rush hour, killing 31 people and injuring 244.

#### Born today

**Robert Goddard**, US inventor of modern rocket (1882-1945);

**Vaclav Havel**, Czech politician, playwright and former dissident (1936-);

**Bob Geldof**, pictured, Irish rock musician and humanitarian (1954-);

**Guy Pearce**, Australian actor (1967-);

**Kate Winslet**, British actress (1975-).



#### Odd spot

Indonesian police have slapped a cordon around a huge landmark Banyan tree in the capital after members of a Muslim youth group attacked it to prove it had no special mystical powers.

#### Today's text

Our love should not just be words and talk; it must be true love which shows itself in action. **1 John 3:18**