



LiqBio—liquid biofuels in New Zealand

The quarterly electronic newsletter from the Bioenergy Association of New Zealand (BANZ) on the Liquid Biofuels Sector http://www.bioenergy.org.nz/liquid_biofuels.asp

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Inside this Issue

- What now for NZ biofuels?
- Biofuel Events—Wellington in March
- Growth in NZ Biofuels
- Where can I buy Liquid Biofuels?
- Biofuels News
- Biodiesel NZ—Guest article

Welcome

Welcome to the first issue of 'LiqBio' the dedicated Liquid Biofuels in New Zealand newsletter. This newsletter will be issued quarterly and supports the Bioenergy Association Liquid Biofuels Programme. BANZ has established new web-pages on Liquid Biofuels on the BANZ web-site. See [here](#) for details. These web-pages provide you with information about liquid biofuels in New Zealand from where to buy biofuels to a 'Who's Who of Biofuels in New Zealand', details on research, details on Case Studies and much much more. If your details are not on the site—[contact us](#). The web-pages have been established to promote liquid biofuels in New Zealand. Join us as we ensure New Zealand has a liquid biofuels future.

Andre Hamman, Convener of the BANZ Liquid Biofuel Interest Group

What now for NZ Biofuels?

The latter half of 2008 was a time of flux in the liquid biofuels sector in New Zealand. In October the Biofuel Sales Obligation (BSO) was introduced and gave a significant boost to the fledgling but growing liquid biofuels industry in New Zealand. By December the new National led Government repealed the Biofuel Bill and the BSO was no more. Energy and Resources Minister Gerry Brownlee has indicated the likely introduction of tax breaks or other incentives on fuels coming from proven sustainable sources.

The Liquid Biofuel Interest Group (LBIG) has called on the Government to move quickly to avoid a vacuum but despite this there are still no details on what the alternative to the BSO will be and we are now in February. Brian Cox, Executive Officer of BANZ notes that the Members of the LBIG are considering their own future options and are keen to discuss these with the new Minister.

Mr Cox added, "There's no doubt that this change in policy has hurt a lot of people and has knocked us back as an industry. That said, we have to move on and we have to find a way of making biofuels work and despite what we are hearing in a number of circles, NZ biofuels are sustainably produced. /...cont' on page 2

Partnerships

This newsletter is supported by the Energy Efficiency and Conservation Authority



Where can I buy Liquid Biofuels in NZ?

The new dedicated web-pages for liquid biofuels on the BANZ web-site enable the general public to search for details of their nearest biofuel supplier. Interested parties can search by location, fuel type (e.g., biodiesel or bioethanol) source of fuel (eg, tallow, rape seed oil, used cooking oil). See [here](#) for details.

Whether you are an individual looking for a more sustainable transport solution or a fleet owner conscious of your carbon footprint, one of these suppliers will be able to help you. If your details are not showing on our site, send us your details by completing this [form](#).

EECA recommends only buying from sellers who are able to demonstrate that they are compliant with the [Engine Fuel Specifications Regulations 2008](#). Ask your supplier for evidence that they comply.

What now for NZ Biofuels? /.....continued

That has to be our trump card. Increasingly, individuals, companies (not to mention tourists) are looking for green credentials. Liquid biofuels offers such a solution and several companies across New Zealand are selling biofuels and several, I am pleased to say are already buying it. Of course its not in the quantities that the BSO would have enabled. We'll have to work harder and longer to achieve that. I'm confident though that with quality, reliability and sustainability on our side we have a strong future ahead of us. We are down but not beaten for sure".

A time line of events is set out on the Liquid Biofuels web-pages of the BANZ web-site. If you would like to engage in the discussions around possible alternative support options for liquid biofuels contact [Connie Crookshanks](#) for details on how you can join the Liquid Biofuels Interest Group.

Biofuel Events

It's all happening in March and its all happening in Wellington— with two key biofuel events.

- 24th March —**EECA's 5th Annual Electric Vehicles and Biofuels Event** - more details [here](#).
- 25th March —**BANZ Workshop—The Current Status of Liquid Biofuels Supply in New Zealand—Addressing the Supply Opportunities**—more details [here](#) and booking form [here](#). Further details on the BANZ Workshop speakers below. **A discount for joint registration is available.**

BANZ Workshop speakers

- **Andrew Saunders, MED**—the Biofuels sector is governed by MED who administer funds for commercialisation of biofuels, fuel standards, legislation, and standards for sustainability. Andrew will talk on biofuels standards.
- **Dave Bodger, Gull**—Gull was the first to bring a biofuel to market in New Zealand with Gull Force 10. Also available is Gull Regular Plus. Dave will talk on what a retailer is looking for in terms of quality from potential suppliers.
- **Tony Hocking, Biofuels Testing New Zealand [IPL]** — Tony will talk on the testing regimes for biofuels and the importance of quality fuels.
- **Barry Fischer (Fulbright Scholar, Massey University Centre for Energy Research) and Attilio Pigneri (Ass. Director, Massey University Centre for Energy Research)**—Barry and Attilio will present a comparison of biofuels development in the UK, the US and New Zealand.
- **Jim Watson, Pure Power Global**—Pure Power is leading the charge on Salix (Willow) in New Zealand. Jim will give an update of progress.
- **Ken Hulls, Taharoa C incorporation**—Ken will present on the potential Miscanthus offers as a biofuel.
- **Rupert Craggs, NIWA**—Rupert will present an update of the potential algae offers as a biofuel.
- **Bruce Smallfield, NZ Institute for Plant and Food Research**—Bruce will deliver a presentation on the potential that jatrophha offers as a biofuel in New Zealand.
- **Andrew Simcock, Biodiesel NZ**—Biodiesel NZ are leading the charge on rapeseed as a biofuel and Andrew will update us on capacity production volumes.
- **Gary Brockett, Ecodiesel**—Ecodiesel use tallow to make biodiesel. Gary will talk about specific production and quality issues.
- **Peter Motion, General Manager Ethanol & Industrial Sales, Fonterra**— Fonterra produce most of NZ's ethanol from whey.
- **Gavin Hedley, Alternative Energy Solutions (AES)** —AES is involved in the exciting bio-oil plant in Auckland and Gavin will give us an update on progress.
- **Michael Jack, Scion**—Scion will give an overview of second generation technologies.
- **Tissa Fernando, Flo-Dry Engineering**—Flo-Dry Engineering produces biodiesel from tallow. Tissa will focus on reactive distillation in his presentation.
- **Andre Hamman, Biodiesel Australasia Ltd**—Andre will give us something a little different to think about in his talk.
- **Richard Gapes, Maunsell Ltd**—Richard will talk on biobutanol a second generation biofuel.

International biofuels news

Biofuel Partnership Raises \$500,000 for BioCube—Biofuel Partnership Limited has successfully filled its \$500,000 share offer for the commercialisation of its BioCube – a shipping container sized transportable biodiesel processing unit. The BioCube will produce biodiesel from a broad range of oil-bearing plants, particularly those grown in harsh tropical and sub-tropical zones. Further information from http://www.biofuelpartnership.com/news_20090205_offer.html

Tariffs splits EU biofuel industry—The decision to allow Sweden to import Brazilian ethanol at a lower tariff rate has infuriated other European biofuel producers. The European industry is said to have spent as much as €5 billion on new technology and infrastructure, but is currently unable to produce bioethanol as cheaply as the United States and Brazil, in some cases thanks to local support measures in the country of origin. More [here](#).

Fish Oil to Biodiesel? - Approximately 2.5 million Euro has been allocated by the European Union to Finnish research centre VTT for development of a production plant to turn fish waste into biodiesel. See: http://www.vtt.fi/whatsnew/2008/25112008_enerfish.jsp?lang=en

Biofuel for €0.50 per litre? - Researchers at the Karlsruhe Institute of Technology have developed a process called bioliq to produce cheap biofuel by pre-processing biomass regionally. The Institute is working with biofuel company Lurgi GmbH to develop the technology which converts plants to 'an oily liquid called bioliqSynCrude® in several locations before being transported to one central processing plant'. The liquid suspension has an energy density 13 to 15 times higher than that of straw and is thus comparable to the energy density of crude oil. More here <http://cleantech.com/news/4123/biofuel-50-cents-liter>

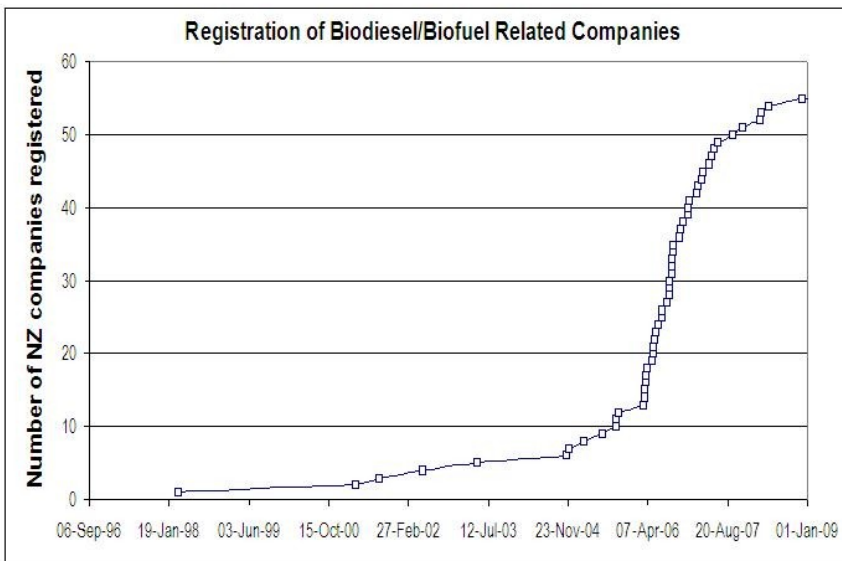
Renewable Energy Fund - Supporting Development and Deployment of Renewable Energy in Australia—The Australian Government has introduced the Renewable Energy Fund to support the adoption of renewable energy technologies in Australia. The Fund will provide \$500 million for competitive grant programs that aim to demonstrate the viability of renewable energy technologies on a technical and economic basis. Note the \$15 million [Second Generation \(Gen2\) Biofuels Research and Development Program](#).

New South Wales Biofuels Mandate—Legislation will be introduced into NSW State Parliament this year to increase the volumetric **ethanol mandate to 4 percent from 1 January 2010 and 6 percent from 1 January 2011**, and then to replace all regular grade unleaded petrol with E10 from 1 July 2011. The legislation will also introduce a volumetric biodiesel mandate of **2 percent initially**, rising to 5 percent as supplies become available. The mandates will apply to major retailers as well as primary wholesalers. Further details [here](#).

Germany adopts B7 standard—The standards are in place for B7 to be commercially launched in Germany. The new standards boost the allowable blend in the German market from a 5 percent to 7 percent blend by volume of biodiesel in diesel fuel. It is estimated that the change could increase the potential sales volume of biodiesel from 1.5 million metric tons to 2.1 million metric tons (450 million gallons to 630 million gallons). The market launch of B7 is expected to revive the slack demand for rapeseed oil in Germany. See [here](#) for more details.

Liquid Biofuel Interest Group—The LBIG Committee met last on the 20th January 2009. Recent activities have focused on issuing press releases in response to the Government's recent repeal of the Biofuel's Bill. Committee Members have been discussing the possible alternative incentives that will assist the growth of biofuels in New Zealand. For a list of Member's of the Committee see [here](#) and for details on recent activities see [here](#). The Committee is due to meet again on 24th March 2009 after the EECA Biofuels and Electric Vehicles Conference in Wellington. The meeting will be an extended Committee meeting **open to all Interest Group Members**. If you are not a member of the Liquid Biofuel Interest Group and would like to join, contact [Connie Crookshanks](#).

Biofuels—here to stay—charting the growth in NZ



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Analysis of the number of companies registered in New Zealand as having an interest in liquid biofuels provided the associated graph. Clearly the lead up to the introduction of the Biofuels Sales Obligation stimulated the registration of number of new companies.

The leading biofuels companies in New Zealand are listed in the new BANZ Liquid Biofuel web-pages here. The list presents those producing biofuels, retailing and wholesaling biofuels and those who are leading the research for second generation biofuels. If your details are not on this site please [contact us](#).

Biofuels NZ focus—Oil seed rape Biodiesel NZ style

Biodiesel New Zealand is New Zealand's leading grower of oilseed rape for biodiesel. The company, a Solid Energy business, has plans to boost its current one million litres per year production volumes to four million litres per year in its next stage of growth.

General Manager Andrew Simcock says the proposed increase is a sizeable one and it is now talking to farmers who have shown an interest in growing oilseed rape crops. The company held a series of South Island field days in November last year to give potential growers an opportunity to learn more about the crop and about progress made by the business since its first harvests last year.

Simcock says, *"The field days were well attended. Farmers are interested in oilseed rape's potential to complement their other crops and, of course, make money. Rapeseed grown as a rotational crop has a number of benefits. This has been demonstrated in Europe and part of the work we've been doing with early trials here is to determine if that European experience can be replicated here."*

Biodiesel New Zealand's main growing areas have been in Canterbury, with some smaller areas in Southland, Otago and Marlborough. Simcock says the amount of crop area to be sown this autumn is still being decided. *"The sustainability of the overall business – including the growers working with us, the product and for our customers -- is a key driver. In light of the recent fall in the price of fuel, we need to take a prudent approach."*

The business will soon complete the first stage of a new facility near Christchurch enabling the drying, cleaning and storage of up to 10,000 tonnes of rapeseed. The capacity increase to four million litres will be done by optimising the company's existing Christchurch facility. This will allow more time to consider the best timing, size and location of any future biodiesel production site for the next planned step in production capacity, to 15 million litres a year.

Biofuels international events

World Biofuels Markets—Europe’s Largest Biofuels Congress and Exhibition, Brussels Expo, 15-19 March 2009 —This year, six pre-congress forums and a two day conference will address all the major issues effecting the future of the biofuels industry including: Algae Fuels, Cellulosic Ethanol, Renewable Diesel & Synfuels, Biobased chemicals & Bioplastics, Forestry Biofuels & Jatropha, Sustainability & Policy. Further details [here](#).

Bioenergy Australia 2009 Conference - Call for Presentations—Expressions of Interest are sought from potential paper and poster presenters, sponsors and trade exhibitors for the 2009 Bioenergy Australia conference which will be held in early **December 2009**. Please contact Stephen Schuck, Bioenergy Australia Manager, Tel/Fax: (02) 9416 9246 Email: sschuck@bigpond.net.au to express your interest.

IEA Biofuels Report—From 1st- to 2nd-Generation Biofuel Technologies An overview of current industry and RD&D activities, November 2008

It is increasingly understood that 1st-generation biofuels (produced primarily from crops such as grains, sugar beet and oil seeds) are limited in their ability to achieve targets for oil-product substitution, climate change mitigation, and economic growth. Their sustainable production is under review, as is the possibility of creating undue competition for land and water used for food and fibre production.

The cumulative impacts of these concerns have increased the interest in developing biofuels produced from non-food biomass. Feedstocks from ligno-cellulosic materials include cereal straw, bagasse, forest residues, and purpose-grown energy crops such as vegetative grasses and short rotation forests.

The IEA Biofuels Report looks at the technical challenges facing 2nd-generation biofuels, evaluates their costs and examines related current policies to support their development and deployment. The potential for production of more advanced biofuels is also discussed. Although significant progress continues to be made to overcome the technical and economic challenges, 2nd-generation biofuels still face major constraints to their commercial deployment. Policy recommendations are given as to how these constraints might best be overcome in the future.

The key messages arising from the study are as follows:

- Technical barriers remain for 2nd-generation biofuel production.
- Production costs are uncertain and vary with the feedstock available.
- There is no clear candidate for “best technology pathway” between the competing biochemical and thermo-chemical routes. The
- Even at high oil prices, 2nd-generation biofuels will probably not become fully commercial nor enter the market for several years to come without significant additional government support.
- Considerably more investment in research, development, demonstration and deployment (RDD&D) is needed to ensure that future production of the various biomass feedstocks can be undertaken sustainably and that the preferred conversion technologies are identified and proven to be viable.
- Once proven, there will be a steady transition from 1st- to 2nd-generation biofuels.

This report can be accessed on the BANZ web-site in the dedicated liquid biofuels web-pages [here](#).

ASTM International—Biofuels Quality Standards

ASTM International recently published new and revised standards for biofuel quality. These revised ASTM standards can be purchased from Standards New Zealand direct at www.standards.co.nz. The new and revised standards are:

- **ASTM D6751-08**—revised to include the requirement of a cold soak filterability test that controls minor compounds and provides a more accurate reading of how the fuel will perform in cold weather conditions
- **ASTM D975-08a**—Specification for Diesel Fuel Oils (on-and off-road applications) - revised to allow for up to 5% biodiesel content. This allows B5 blends to be treated the same as conventional diesel for testing purposes.
- **ASTM D396-08b**—Specification for Fuel Oils (home heating and boiler applications) - revised to allow for up to 5% biodiesel content. Like D975, this revision allows B5 blends to be treated the same as conventional fuel oil for testing purposes
- **ASTM D7467-08**—Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20) - a newly created Standard governing the properties of blends containing between 6 and 20% biodiesel for on- and off-road applications.

Sustainability Criteria for Biofuels - an ISO Standard?

Proving the sustainability of biofuels is a key issue both internationally and in New Zealand. It is well known and proven that the existing resources available in New Zealand such as tallow, used cooking oil, rotational oil seed crops and whey are indeed sustainable and moreover, are amongst the best performers in terms of net green house gas emission reductions.

The International Standards Organization (ISO) is currently accepting votes on a new work item proposal (NWIP) – [a Standard for sustainability criteria for biofuel](#). This vote will determine whether ISO decides to develop a new Standard on sustainability criteria for biofuel. See [here](#) for New Zealand's involvement in the process via Standards New Zealand.

Membership—Liquid Biofuel Interest Group

Membership of the Liquid Biofuel Interest Group (LBIG) is open to Members of BANZ. If you are interest in Membership please contact [Connie Crookshanks](#).

- Individual Members interested in Membership of an Interest Group are subject to a charge of \$100 per Group.
- Associate and Corporate Members are permitted to have Membership of at least one Interest Group included in their Membership fee.

The Bioenergy Association of New Zealand Inc. (BANZ) comprises companies, research organisations and individuals who have an interest in markets for converting biomass or biomass residues into energy. To receive this newsletter regularly contact [Connie Crookshanks](#) for membership details. See [here](#) for more info.

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