

WELCOME from the BANZ Executive Officer -

- \$1.2million of Wood Energy grants announced



Welcome to the latest *Bioenergy News*.

In this issue of *Bioenergy News* we are pleased to see that EECA has announced the awarding of funding of a further \$1.2million of grants to the bioenergy sector for wood energy projects. This comes on top of previous funding of \$1million for school projects, \$360,000 for feasibility studies and \$1.1 million for wood energy 'demonstration' projects.

Since the introduction of the Wood Energy Grants Scheme over 30 projects have been funded ranging from demand side projects to convert coal boilers to be fuelled on wood chips, through to supply side projects for the production of quality wood fuel from forest harvesting residues.

The funding from EECA provides a very valuable assistance to wood energy demonstration projects that wouldn't otherwise proceed at this time.

To compliment this news, the newsletter this month has a slant towards wood fuel issues with several resources and articles focussing on wood fuel.

We have known for years that wood energy has the potential to provide a greater proportion of residential and industrial energy but the relative economics of coal and gas has prohibited greater uptake. With the introduction of climate change initiatives and the passing of the emissions trading legislation bioenergy is now poised for take off. The projects that have been funded by EECA are the thin end of a very deep wedge and we now need to ensure that bioenergy is recognised as a main stream energy source. The high quality wood fuels in the form of pellets, briquettes and chip ensure that coal at least can be replaced by fuels that have all the characteristics of coal and can be considered as "white coal".

The passing by Parliament of the Biofuels Bill also provides a significant incentive for the supply of liquid biofuels from our indigenous bioenergy resources. BANZ through the Liquid Biofuels Interest Group will take this opportunity up with a planned workshop in February.

The proposed National Policy Statement on Renewable Electricity Generation is another step forward for the sector but should be widened so as to also include heat plant projects and not just be limited to electricity generation.

Last week I was a speaker at the HERA and metals industry annual conference putting the case for bioenergy. A copy of my presentation is on the BANZ website. The conference highlighted the greatly widening opportunities for the bioenergy and equipment manufacturing parties to work together and make equipment here in NZ for the applications now arising.

In this issue we feature greater contribution from members. The news and views are attributed to the contributor and are included so that BANZ fosters greater communication between members.

With all of these initiatives bioenergy is now in a sound position to take up the potential we have sought for so long.

Brian Cox, Executive Officer BANZ

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- Useful ‘how to’ Woodfuel Guides
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News from the BANZ Board

The last Board meeting was 11 September 2008. Key issues discussed included:

- Update on the Executive Officer activities
- Action Plan for BANZ work going forward
- BANZ in the news
- Proposed future workshops
- Accounts update

The BANZ Board continues to work on the Action Plan that is on the Members area of the BANZ website. Members are encouraged to view the Action Plan and provide their views on gaps, priorities etc.

Minutes from the last Board meeting are available to **paid-up** Members in the Members Area of the BANZ web-site using this link: <http://www.bioenergy.org.nz/members/login.asp>.

Welcome to the new BANZ Chairman



Welcome to Rob Mallinson the new Chairman of the Bioenergy Association. Rob was elected to the position of Chairman at the recent Board Meeting.

Rob is the Managing Director of Living Energy. He has extensive experience in project management, having progressed from the “Channel Tunnel” to work for the worlds leading off-shore (oil rig) construction company, being based in the UK, Holland, and in the USA. He was General Manager of Biogrid in NZ.

Living Energy is an Associate Member of BANZ.

Welcome to new BANZ Members

Welcome to the following recent 'new' members of BANZ.

Full Associate Membership

- **Zymus International Ltd.** – Contact Maria Dagger

Ordinary Associate Membership

- **Spark Biomass Energy** – Contact Eduard Ebbinge

Individual Membership

- Paul Wilson, **Queenstown Lakes District Council**

Check the 'who's Who on the BANZ web-site for more details about Members - . http://www.bioenergy.org.nz/bioenergyinfo.asp#whos_who. The listing layout is being improved currently so bear with us.

[Executive Officer comment - Membership Subscriptions for existing Members are due for renewal and you will have received an invoice in the last few months. Please can you pay this invoice promptly.]

Recent Submission by BANZ on the NPS for Renewable Electricity Generation

BANZ has made a submission on the proposed National Policy Statement (NPS) for Renewable Electricity Generation that was publicly notified on 6 September 2008.

Bioenergy's application is wider than electricity generation, including heat supply, production of biogas, and the production of liquid biofuels. BANZ therefore sought that the **NPS be broadened to cover all forms of renewable energy, not just electricity generation.**

Many of the proposed policies and plans associated with electricity generation in the draft NPS can readily be adapted to heat, biogas and liquid biofuel applications.

BANZ submitted that heat supplies, biogas and liquid biofuel applications are often able to replace the need for additional electricity generation, or at least replace the need for use of natural gas, coal and hydro for base load generation, and so should be covered by an NPS. In addition gas and hydro energy can then be reserved for their most valuable use which is for the meeting of peak electricity demand using their quick response capabilities.

Heat, biogas and liquid biofuel projects generally have a more local rather than national impact than many electricity generation projects. However because of local interests, the potential for local adverse impacts to be argued as outweighing the broader national interest often occurs. This consideration of local vs national interests will be provided with greater balance through adoption of the NPS if it is broadened to cover all forms of renewable energy.

Members can view the full submission on the BANZ website.

BANZ Interest Groups – Update

BANZ has FOUR Interest Groups to target more closely services to members related to their specific interests. The groups are as follows:

- Biogas Interest Group
- Liquid Biofuels Interest Group
- Wood Pellets Interest Group
- Wood Fuel Interest Group

If you are interested in being a member of a specific Interest Group please contact the Deputy Executive Officer at Connie.crookshanks@bioenergy.org.nz.

- **Biogas Interest Group**

The Biogas Interest Group (under the leadership of Guenter Wabnitz [Group Convener]) has scheduled a conference call meeting for Members of the Interest Group for 11th November at 2.00pm. Guenter recently shared a presentation on biogas farming that he gave at a gas industry conference, which pointed in the direction of biogas as a potential substitute of natural gas in New Zealand. If you are interested in the activities of the Biogas Interest Group (in particular the forthcoming meeting) and/or would like to see a copy of the biogas farming presentation please contact Guenter for further details at Guenter.Wabnitz@maunsell.com.

Content of a Biogas web-site is also under development.

- **Liquid Biofuels Interest Group**

Discussions have been underway with the Biofuel Manufacturers Association with regard to their merging into BANZ. As a result Andre Hamman who is currently their Treasurer has agreed to take over as temporary Convener of the Liquid Biofuel Interest Group. Discussions are underway with EECA for funding of the liquid biofuels website.

Plans are also in the making for the BANZ 2009 Liquid Biofuels Supply Conference. The Liquid Biofuels Interest Group is currently considering options for themes and speakers for an event provisionally scheduled for February in Wellington. The focus on the proposed event is **fuel supply** and **fuel quality**. If you would like further details or are interested in sponsoring this event please contact connie.crookshanks@bioenergy.org.nz

- **Wood Pellets Interest Group**

As the first of the Interest Groups off the blocks, its time to look again at the content of the Wood Pellet's Interest Group web-site. www.woodpellets.org.nz This will be the focus over the next month. We are already receiving some interest in the next wood pellets workshop. This is likely to be early – mid 2009 at the earliest.

- **Wood Fuel Interest Group**

The BANZ Executive Officer has been working with EECA on the development of the Woodfuel Classification Guidelines (see Feature Article later in this newsletter for more details). A first draft of the Guidelines have been circulated and from comments received a revised draft will be prepared. This will then be recirculated to those in the Interest Group and other relevant parties.

In the coming months the Interest Group will be developing a theme and identifying speakers for a March 09 event on Wood Fuel. Further details to come in the next newsletter.

The Wood Fuel Trading Bulletin Board will soon be available on the Bioenergy Knowledge Centre web-site.

Interest Group Conveners

The Conveners of each of the Interest Groups are as follows.

Interest Group	Convener
Biogas	Guenter Wabnitz, Maunsell Guenter.Wabnitz@maunsell.com
Liquid Biofuels	Andre Hammond Biodiesel Australasia Ltd biodieselnz@xtra.co.nz
Wood Pellets	Tbc (contact Connie Crookshanks until further notice) Connie.crookshanks@bioenergy.org.nz
Wood Fuel	Rob Mallinson, Living Energy, rob.m@livingenergy.co.nz

Interest Group Work Programmes

The preliminary Work Programmes for each of the Interest Groups were discussed at meetings held before the recent AGM. Details of the Work Programmes are set out in the Interest Groups areas in the **Members Only** section of the BANZ web-site.

New Zealand News Briefs

- **Andrew Simcock appointed General Manager of Biodiesel New Zealand**
- **ISO Sustainability Criteria for Biofuel**
- **Hospital Boilers Conversion to Wood Fuel**
- **Tahuna Intermediate in Dunedin to become launch site for Kōb Pyrot boiler**
- **Argent Tallow biofuel plant plans scrapped**

Andrew Simcock appointed General Manager of Biodiesel New Zealand - Andrew Simcock has been appointed General Manager of Biodiesel New Zealand Ltd, Solid Energy New Zealand Ltd's renewable fuel business. Mr Simcock, the former general manager sales and marketing of SKOPE Industries, brings considerable marketing, commercial and general management experience to the business. His career also includes roles with PlaceMakers, Carter Holt Harvey, PDL Industries and Firestone. Alongside a Master of Commerce (Honours) degree from the University of Canterbury, Mr Simcock also has a BSc in plant and microbial sciences.

Andy Matheson, Solid Energy General Manager Renewable Energy, says the appointment reflects the strong growth plans for the biodiesel business. "The role is effectively an addition to our current management strength and will focus on core operational performance," Mr Matheson says.

Biodiesel New Zealand was established in May 2007 when Solid Energy purchased Canterbury Biodiesel, a business founded in 2005 by Paul Quinn. In relinquishing his general management duties, Mr Quinn moves to a technical advisory position and will focus on new capacity development, Mr Matheson says. "In the past 17 months, the business has worked with South Island cropping farmers to successfully trial European oilseed rape varieties as a fuel feedstock, we have expanded our collection network for used cooking oil and we have a new oil extraction and biodiesel manufacturing facility under construction at Rolleston," Mr Matheson says.

"As well as working with cropping farmers and the Foundation for Arable Research to ensure oilseed rape has a sustainable and worthwhile place in farmers' regular crop rotations we are building a portfolio of contracts to help ensure future feedstock supply and the business is well on its way to its target of producing 70 million litres of high-quality biodiesel a year." Biodiesel New Zealand is soon to open discussions with farmers interested in contracts for autumn-sown oilseed rape, Mr Matheson says.

ISO Sustainability Criteria for Biofuel – watch this space - The International Standards Organization (ISO) recently released a ballot to determine whether it should develop new International sustainability criteria for biofuel. The work proposes to draw on the substantial international work already underway, such as in Europe (CEN - European Committee for Standardisation), the Roundtable on Sustainable Biofuels, the International biofuels forum, and the Tripartite task force (Brazil, EU, USA), to obtain a consistent worldwide Standard.

Standards New Zealand (SNZ) recently sought views in mid September to establish:

- (1) Whether New Zealand thinks this International Standard should go ahead,
- (2) Whether New Zealand wants to participate, and if so,
- (3) What the framework should be for our participation.

International Standards can act as a reference point for international trade and for local Standard development. A decision to actively participate in the development of this International Standard would keep New Zealand informed of the latest developments, assist New Zealand to ensure our own preparations are not out of step, enable New Zealand to decide whether to contribute on matters of importance to us, and potentially enable New Zealand to influence standards development to have regard for capability in particular biofuels.

Following several stakeholder (including from BANZ) responses indicating support for New Zealand's participation, Standards New Zealand has advised that New Zealand will vote on the ISO new work item proposal on sustainability criteria for biofuel.

Hospital Boilers Conversion to Wood Fuel – Transition Town Nelson Energy Group is trying to influence Nelson Hospital to stop burning coal in its boiler and install a woodwaste CHP scheme and use the grid as a backup (they have asked for tenders for a new diesel generator for backup that we are attempting to dissuade them from) . More details about Transition Towns can be found at: <http://www.transitiontowns.org.nz/> and specifically about the efforts of the Nelson Energy Group at <http://www.transitiontowns.org.nz/node/851>

[Executive Officer comment - Members should be aware that a number of hospitals such as Nelson are seeking tenders for diesel generators or coal supply. These are opportunities for the hospital to convert to wood fuel and possibly CHP]

Tahuna Intermediate in Dunedin to become launch site for Kōb Pyrot boiler - As part of EECA's Renewable Heating in Schools project, EECA selected Spark Biomass Energy to install a fully automated 400kW Kōb Pyrot with spring-loaded fuel extraction system at Tahuna Intermediate, Dunedin. For this launch project, Spark has partnered with Tubman Heating Services, one of leading boiler installation and servicing agents in New Zealand, to install and commission the Kōb Pyrot boiler.

Argent Tallow biofuel plant plans scrapped - New Zealand's drive towards a domestic biofuels industry has been hit by a leading British producer's decision to shelve plans for a \$100 million-plus plant in Tauranga. Argent Energy says a tax break for bioethanol in petrol will make oil companies reluctant to buy biodiesel produced locally from animal tallow and cooking oils. That would mean a heavy reliance on bioethanol imports from Brazilian sugarcane refineries, at least until research efforts to turn resources such as industrial gas wastes into fuel in New Zealand bear fruit. The head of Argent's New Zealand subsidiary, Dickon Posnett, says the Government's refusal to review a 42c a litre tax break on bioethanol until at least 2010 makes the field too uneven for his company to press on with local biodiesel production. Although Argent would keep looking out for any policy change, perhaps after the general election, he was returning with his family to Britain after working almost two years here on the feasibility of a plant which could have created 60 jobs. http://bioenergy.checkbiotech.org/news/2008-08-05/Tallow_biofuel_plant_plans_scrapped/

[Executive Officer comment – news from members about specific projects or activities are welcome and will be included in the Newsletter. They are included in an effort to get greater cross-fertilisation of knowledge and experience throughout the sector. They do not reflect the views of BANZ but of the parties to whom they are attributed. If you have some news that you would like included please send to the editor.]

FEATURE ARTICLE: UPDATE - EECA Wood Energy Programme - South Island steams ahead with wood energy projects

More South Island businesses are seeing the benefits of using wood fuel in their businesses by converting existing boilers or developing wood fuels to sell to the market. With the help of grants from the latest round of the wood energy grants scheme, run by the Energy Efficiency and Conservation Authority (EECA), eight businesses in the South Island have new wood energy projects up and running.

EECA's grants are available for organisations that could put in a wood fuel system or contribute to the development of the wood fuel industry, for example as a supplier of wood products.

Crusaders Gardenmakers in Christchurch, SRMG Holdings in Marlborough and Jack Stevens Arboriculture in Takaka are gearing up to supply wood chips to local businesses in the region. Crusaders Gardenmakers and SRMG Holdings have been awarded grants to buy equipment to feed, chip, and store wood chips. Jack

Stevens Arboriculture has been awarded a grant to purchase a chipper and tipping truck. Together, these projects will provide over 33,000 tonnes of wood chips per annum to the South Island market.

Wigram Lodge and Moffat's Flowers, both of Christchurch, PH Kinzett of Blenheim and McCallum's Group in Invercargill have all received grants to either install new wood fired boilers or to convert existing boilers to burn wood fuels.

Grants totalling about \$1.2 million were awarded to 9 projects through this funding round.

'The interest shown by these South Island businesses shows that there is a lot of opportunity to develop the wood energy market in New Zealand, said Murray Bell, Business Manager for EECA.

'EECA estimates that there is over 30 PJs/year of potential wood energy available in New Zealand. Our grants programme targets both sides of the equation. We're

encouraging supply and generating demand to help the wood energy industry really take off - because using wood means using energy that produces minimal greenhouse gases.'

Information and application forms for the next funding round, which closes on 27 February 2009, are listed on the Government Electronic Tenders Service (GETS) www.gets.govt.nz.

Working with Miscanthus – Ken Hulls

Miscanthus is an energy crop with strong established markets and interest globally as a thermal fuel, and as a feedstock for cellulosic bio ethanol. As thermal fuel it is used in dedicated biomass thermal stations and for cofiring with coal. As a bio ethanol feed stock it is seen by companies such as BP Biofuels as a prime source for bioethanol and is targeted for the pilot scale process plant currently being constructed with BP support.

Until recently this crop was not able to be grown in NZ. However this has now been remedied through the work of a Maori incorporation, The Proprietors Of Taharoa C Block (Taharoa C), better known for its ownership of the Taharoa iron sand site. Taharoa C has now obtained ERMA and MAF permits for the plant to be grown in New Zealand. This lengthy and expensive process concluded in August with the granting of an Import Health Standard by MAF.

Miscanthus was selected from other candidate energy crops by Taharoa C, for NZ following its decision to develop biomass for bio energy, to compliment its other renewable energy initiative in wind power. Miscanthus is a sterile plant, hence does not spread uncontrollably, and was selected for its ability to provide good yields on marginal land. Crop yield trials in NZ are commencing now on a series of marginal land sites. International experience shows yields in excess of 40 dry tonnes/Ha/yrs on good soils down to as low as 14 dry tonnes / Ha/yr in cold climates and arid conditions.



Fig 3: Miscanthus production in the UK

As it is used for thermal generation, the crop requires no drying. As harvested moisture content is described by a large user in the UK as suitable for its direct application in thermal generation. Typical thermal values are in the range 17-19 GJ/ tonne.

Taharoa C plans to contract growers and provide a single source to customers for Miscanthus. Further information from Ken Hulls (021 188 5633) or Peter Brown (0274 984 241)

Wood Fuel Classification Guidelines

The first draft of the Wood Fuel Classification Guidelines are currently under revision taking into account comments received from the industry. If you are interested in participating in the development of these guidelines contact the executive Officer.

The guidelines will cover all forms of wood fuel including;

- Forest residue wood chip
- Demolition wood chip
- Wood processing residue
- Wood pellets
- Brickettes

Summary of Case Studies on the Bioenergy Knowledge Centre

The Bioenergy Knowledge Centre web-site is regularly updated with new cases studies. Recent additions include the following:

- [Bioenergy Options for New Zealand - Pathway Analysis](#) - Following on from the Bioenergy Options Situation Analysis, the Pathways Analysis report looked at some the significant biomass resource to user energy options in detail, with Life Cycle Analysis of some of the possible pathways used to compare the costs, environmental impacts and energy returns. The report also looks at biomass supply versus energy demand. The report concludes with a vision of what a large scale bioenergy scenario might look like for New Zealand.
- [Co-firing of Biomass with coal at the Dunedin Energy Centre](#) - Energy for Industry purchased the Dunedin Energy Centre from the Otago District Health Board (ODHB) in 2002 under a BOOT partnership (Build, Own, Operate, Transfer). The energy centre comprises four coal-fired steam boilers with a total capacity of 30 MWth and a steam reticulation system. Energy in the form of steam and hot water are supplied to ODHB, Cadburys, the University of Otago, NZTS and a number of smaller customers. Following acquisition of the Energy Centre, energy for Industry carried out an extensive upgrade programme to extend the life of the plant and bring it up to modern best practice standards.
- [The feasibility of a wood to ethanol plant using a thermo-chemical process](#) - A financial model of a thermo-chemical biomass to ethanol plant has been developed for LanzaTech. In a base case modelling scenario the plant produces 150m litres of ethanol and consumes 770,000 tonnes of wood per year. The total investment required to build the plant would be NZ\$170m. The breakeven selling price is NZ\$0.72 per litre.
- [New Zealand Biomass Resource Atlas - Volume 1 - Lignocellulosic Residue](#) - This report presents a set of data as maps and tables, showing the amounts and locations of forest residues and other lignocellulosic residues over time from 2005 to 2030 (2050 for forest harvest residues).
- [New Zealand Biomass Resource Atlas - Volume 2 - Wastes and Effluents](#) - This report presents a set of data as maps and tables, showing the amounts and locations of potential energy that can be derived from municipal, farm and some industrial wastes and effluents as at 2005.

Buying Wood Fuel – ‘Energy content and measuring it’

The following two case studies focus on buying wood fuel and in particular a payment system that is based on energy content rather than weight. Following this theme, the ‘Featured Equipment’ spot in this issue of the newsletter highlights the wood chip bucket moisture meter.

Wood boiler fuel - Payment by energy versus weight – Case study 1 - This study determines the effects of moving from a payment system based on weight to a payment system based on energy-content at a large industrial site, using woody biomass as a fuel source. The benefit of paying by energy content would be that the purchaser could predict how much fuel he would need to buy to meet a specific energy demand. An energy-based payment system could also lead to delivery of better quality fuel (i.e. drier and cleaner), thus helping to overcome one of the barriers to increased use of wood residues as a fuel. Paying by energy content avoids the issue of over- or under-payment, which can happen with weight-based payment systems... The full Case study is available on the BKC web-site <http://bkc.co.nz/Portals/0/docs/%20FIDA%20ES%20II%20Guidelines%20V3.pdf>

Woody biomass for boiler fuel - Guidelines for payment by energy content – Case Study 2 - A payment system based on energy content is one method of ensuring a high value fuel, which is paid for in a manner fair to both buyer and seller. The higher the quality of the fuel, the higher the energy content, the higher the value to both seller and purchaser. This report makes practical recommendations on how to move from a weight-only system to a simple weight-by-moisture content system... The full Case study is available on the BKC web-site <http://bkc.co.nz/Portals/0/docs/%20FIDA%20ES%20II%20Guidelines%20V3.pdf>

FEATURED EQUIPMENT – Moisture Meter's

This a feature of the Bioenergy Newsletter where BANZ Members are able to share their experiences of the products they use. Members are encouraged to provide information on specific equipment that could be featured each issue. Priority will be given to Corporate Members.



Fig 1: Exotek moisture meter



Fig 2: Schaller moisture meter

One wood chip is not like the other. Unlike pellets or hot logs, wood chips can have a variable water content and, therefore, energy content. Traditionally, firewood or chips are supplied on a “per tonne” basis. By ignoring water content, the energy content of the weight of wood fuel supplied may vary considerably. An easy and practical way for heat users and their wood fuel suppliers to manage this is to use a specialist wood chip moisture meter. This device enables the quick sampling of a delivered load of wood chips to determine its water content and, hence, its energy content.

Moisture Meters that can quickly and accurately determine the moisture of wood fuel are now available in New Zealand.

The bucket-like Exotek moisture meter (Fig 1) has the advantage of being simple to use, though it is only appropriate for wood chip and only goes up to 55% moisture content. It would be appropriate for specialist wood fuel suppliers. The moisture meter is developed by Exotek of Sweden.

The other system from Schaller of Austria (Fig 2) is more sophisticated as it is suitable for any fuel (sawdust, shavings, bark, chip, pellets, elephant grass) and gives accurate readings up to 60% mc, which will be useful for a lot of users of pinus radiata.

Adopting this device will enable the heat user and its supplier to engage in a contractual relationship where the wood fuel is priced on a \$/GJ basis. In other words, it preserves flexibility for the fuel supplier to deliver loads with a varying energy content, yet gives confidence to the heat user that the price paid is consistent with the amount of energy supplied.

and imported by Spark Energy.

The Exotek system is available from Living Energy at (info@livingenergy.co.nz) and Spark Energy at (info@sparkenergy.co.nz).

The Schaller system is available from Living Energy at (info@livingenergy.co.nz).



INTERNATIONAL NEWS

- UK 'Renewable heat Call for Evidence' - summary report
- Asda goes green
- UK sets out more cautious approach to Biofuels
- UK Renewable Fuels Agency Names and Shames
- USDA Invests US \$4M in Woody Biomass

- **Scotland - Pilot seaweed and algae farms are needed to assess Scotland's marine biomass potential**

UK 'Renewable heat Call for Evidence' - summary report - *UK firms were consulted earlier this year and asked what renewable heat opportunities exist and how best to decarbonise the way homes and businesses are heated.* The call from Energy minister Malcolm Wicks forms part of the government's plan to reduce the UK's CO2 emissions and contribute to the target of getting 20% of all EU energy from renewables by 2020. The call sought advice on:

- How existing technologies for producing heat in a lower carbon way - such as combined heat and power, renewable heat, heat from waste, and district heat - could be developed further;
- Whether new incentives were needed to stimulate the development of renewable heat, and what form they might take;
- How surplus heat might be captured and what role there is for low-carbon electricity; and
- Which options could provide the most cost-effective solutions?

At the time, Malcolm Wicks said "*Heating our homes and businesses accounts for nearly half of the UK's energy demand and for almost half of our carbon dioxide emissions. "We are looking for technical contributions and firm evidence of what the government needs to do to develop renewable heat such as biomass, heat pumps and biogas. Also advice on what role low-carbon electricity should play in heating and how surplus heat can be captured, transported and re-used to heat local buildings rather than going to waste.*

The results of analysis of the heat market, undertaken by the Office of Climate Change, are included in the document and act as a talking point to for ideas on how the UK needs to change to reach its target.

The results show:

- 1) UK households use heat for space heating (70%), heating water (27%) and cooking (3%). The majority (81%) of household heat is met using gas. The rest are met from electricity (8%), heating oil (8%) and solid fuels such as wood and coal (2%).
- 2) Heat for the commercial and public sectors is mainly used in buildings for space heating (71%), water heating (13%) and cooking (15%).
- 3) The domestic and industrial sectors generate roughly the same level of CO2 emissions from heat, even though domestic heat demand accounts for a larger proportion of final energy use. The reason for this is that industry uses a higher proportion of more carbon-intensive fuels or electricity to achieve the high temperatures needed.

A copy of the Summary of the Response received is available on the BANZ web-site.

There is an EXTENSIVE set of reference material associated with this work which can be accessed at: <http://heatevidence.dialoguebydesign.net/bgoS/referencesS.asp>

The resources here are plenty and too many to mention. A few reports or sites worth a visit include:

TSEC¹-Biosys: A whole systems approach to bioenergy demand and supply

(<http://www.tsec-biosys.ac.uk/index.php?p=8&t=1&ss=4>) – useful summary details on several wood crops including:

- [Willow \(*Salix spp.*\)](#)
- [Poplar \(*Populus spp.*\)](#)
- [Miscanthus \(*Miscanthus spp.*\)](#)
- [Switchgrass \(*Panicum virgatum L.*\)](#)
- [Reed canarygrass \(*Phalaris arundinacea L.*\)](#)

RENEWABLE HEAT SUPPORT MECHANISMS – DEFRA/BERR October 2007

at <http://www.berr.gov.uk/files/file42043.pdf>

Woodfuel Standards and Economics – Dan Gates and Andy Hall, in Scottish Forestry Vol 61 No. 4 , 2007,

at http://heatevidence.dialoguebydesign.net/rp/E-104_forestry1.pdf

¹ TESC – Towards a Sustainable Energy Economy Initiative

Asda goes green – UK supermarket chain Asda has opened a new store in Liverpool which uses a biomass boiler and geothermal pumps to heat the store and water it uses. The Bootle store, which claims to be the greenest supermarket in the UK, also features doors on all refrigerated units. While the measure is expected to save the store eight per cent in energy consumption, the risk is that the doors could hamper sales.

UK sets out more cautious approach to Biofuels – UK Transport Minister Andrew Adonis has set out plans to take a more cautious approach to biofuels, as part of the Government's response to concerns about the indirect environmental and social impacts of producing them. He published a consultation taking forward key findings from the Gallagher Review (see August 2008 Bioenergy News International Papers of Interest) - including the proposal that the rate of increase of the Renewable Transport Fuel Obligation (RTFO) be slowed to reach 5% in 2013-14 rather than in 2010-11. At the same time he dedicated a further £6 million to research being conducted by the Carbon Trust to accelerate the development of advanced sustainable biofuels technologies. <http://nds.coi.gov.uk/content/detail.asp?ReleaseID=381333&NewsAreaID=2&NavigatedFromSearch=True>

UK Renewable Fuels Agency Names and Shames - According to the first quarterly report on the Renewable Transport Fuel Obligation (RTFO), fuel firms Harvest Energy and Mabanaft are currently exceeding the specified targets for sustainability, while Esso and BP are amongst those failing to meet the target. During the first quarter period, biofuels accounted for 2.61%, exceeding the first year target of 2.5%. As expected, the majority of the fuel was biodiesel, which accounted for 84% of the supply compared to 16% which came from bioethanol. 20% of biofuels met the sustainability targets set by the Renewable Fuels Agency (RFA); against a target for the year of 30% and 97% of UK feedstocks met environmental standards. Carbon savings (which do not currently allow for 'indirect effects' as recommended by the Gallagher Review) averaged 44% during the first quarter, again exceeding the first year target of 40%. http://www.biofuelsmedia.com/news_link.php?new=189

USDA Invests US \$4M in Woody Biomass - The U.S. Department of Agriculture (USDA) has announced a request for proposals for programs to improve the utilization of woody biomass residue from forest restoration activities. The DOA plans to make at least US \$4 million in grants available to winning proposals, with individual grants ranging from US \$50,000 to US \$250,000. The goal of the [Woody Biomass Utilization Programs](#) is to improve forest management procedures by finding energy applications for low-value woody biomass residue. USDA said that the program will do this by cutting costs, creating incentive and lowering business risk for those involved with woody biomass, increasing infrastructure in the industry around national forestlands and lowering economic barriers to the use of woody biomass.

Winning proposals must improve the use of woody biomass from forest restoration activities by using or creating markets for low-value trees and other residue from hazardous fuel use, handling insect and diseased conditions, or treating forestlands impacted by severe weather.

Pre-applications must be postmarked no later than November 7, 2008. After a pre-screening, selected proposals will be invited to submit a full application for review no later than February 13, 2009. For more information on the grant program, [click here](#).

Pilot seaweed and algae farms are needed to assess Scotland's marine biomass potential - The recommendation comes in a report on using biomass for heating and fuel while avoiding the use of valuable agricultural land. Scientists want to see pilot farms and research into the most energy-rich types of seaweed. The report was carried out by the Scottish Association for Marine Science for The Crown Estate. Prof Mike Cowling, science and research manager at The Crown Estate, said: "Given Scotland's rugged western coastline and island groups, and relatively clean seas, it is sensible to examine the farming of seaweeds and sustainable harvesting of natural supplies as a source of energy, to heat our homes and fuel our vehicles.

"Heating and transport make up around three quarters of our energy use so it's vital that we find new ways of meeting that demand. "Extracting energy from seaweed is a particularly efficient and reliable method of producing green energy, and the growing of seaweed could have positive impact on local marine biodiversity." One key advantage of using seaweed is that it avoids the problems associated with agricultural crop biofuels such as pressure on arable land and fresh water.

Dundee University professor of microbiology Geoffrey Codd has also been promoting the idea of using seaweed and other algae as fuel. He feels the practice could help revive traditional UK industries such as harvesting seaweed and create viable and sustainable biofuel sources. The Crown Estate owns almost all of the seabed out to 12 nautical miles and has rights on energy development out to 200 nautical miles. It recently opened up the Pentland Firth seabed for leasing to developers, with interest shown in creating a massive underwater tidal farm.



Useful “how to” Woodfuel Guides

BANZ has not reviewed the content of these Guides but at a first glance they seem quite useful.

“A layperson's guide to efficient, modern production & use of small-scale woodfuel systems” available at <http://www.ecodyfi.org.uk/energy/DyfiEcoWdFfinl.htm>

“How to Buy Wood Fuels - A guide to choosing and buying wood fuels for heating - Logs, Chips, Pellets and Briquettes”

available

at

<http://www.glasu.org.uk/reports/energy&waste/How%20to%20buy%20wood%20fuels%20eng.pdf>

EVENTS CALENDAR:

New Zealand Events:

Biodiesel energy crop field days in Southland, South Canterbury and Canterbury -

Biodiesel New Zealand is hosting a series of South Island field days in November to give potential oilseed rape growers an opportunity to learn more about the crop and progress made by the business since its first harvests earlier this year. The field day schedule is:

- **Southland (Otama)** - Thursday 6 November 1-3pm, Solari property on Otama Flat Road, north-west of Gore (signposted from Otamita Bridge corner of Waimea Highway - SH94).
- **South Canterbury (Hook)** - Thursday 13 November 1-3pm, Foley property at Hook, corner of O'Neill's and Rathgens Roads (signposted from O'Neill's Road turnoff at SH1, south of Makikihi).
- **Canterbury (Darfield)** - Thursday 20 November 1-3pm, Morrison property at Racecourse Hill (signposted from intersection of West Coast Road - SH73 - and Bleak House Road).

For further information contact:

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BANZ 2008 Events – COMING SOON

- **Liquid Biofuel Workshop** – February 2009 – Wellington (tentative)
- **Conference - Wood Pellets in Commercial / Institutional Applications** – April 2009 (provisional)
- **Seminar – Wood Fuel** – March 2009 (details in development)
- **Conversion of hospital boilers from coal to biomass** – further details to come

International Events:

17th European Biomass Conference & Exhibition - Hamburg, Germany (29 June to 3 July 2009).

Detailed information on the Conference subjects and submission of abstracts are available in the "[Call for Papers](#)" on the Conference website <http://www.conference-biomass.com/>

Bioenergy 2008 (4th Annual, Prague, (5th-6th November 2008), will gather virtually all stakeholders of this rapidly developing sector of the Czech Republic. This event, as in other years, will bring you the most up-to-date information on renewable energy business based on bioenergy (biomass, biogas, biofuels). [Web pages of the Conference](#); [Full Conference programme](#); For speaking opportunities contact: bioenergy@bids.cz

Bioenergy Australia 2008 (Sebel Albert Park, Melbourne, Victoria, (8-9 December 2008 [plus a technical tour on 10 December]). The program will cover policies and programs, projects and project development case studies and emerging opportunities. The conference will consider many facets of bioenergy, including some 60 presentations on:

- Biomass sources and supply aspects
- First and second generation liquid biofuels
- Algae and other future feedstocks
- Pyrolysis bio-oil and bio-char
- Anaerobic digestion and livestock wastes
- Energy-from-waste
- Heat and power
- Overarching aspects of bioenergy, such as life cycle emissions and sustainability.

A moderated panel discussion will address the issue "Realising Sustainable Bioenergy Opportunities for Australia". Professor Philip Peck, from the International Institute for Industrial Environmental Economics, Lund University, Sweden, a member of the European Bioenergy Network of Excellence will provide the keynote address. Further details at: <http://www.bioenergyaustralia.org/>

Coming Soon

- **BANZ Board Meeting** - The next meeting is scheduled for **13 November**.
- **Bioenergy News – next issue** - (Jan/Feb 09) - Liquid Biofuels focus including:
 - *Details of the 2009 Liquid Biofuels Conference Programme*
 - *Biofuels Bill – Feature Article from Andre Hammond*
 - *Residue Trading Bulletin Board - details*
 - *Algae – new advances*
 - *US National Biofuels Action Plan*
 - *Product Profile – (contact connie.crookshanks@eastharbour.co.nz to promote your products or ones that you use)*



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 the Executive Officer of BANZ for membership details by email: info@bioenergy.org.nz. Back issues of this E-zine are on the website, www.bioenergy.org.nz