

bio-power news

Issue 12

April 2004



The Big Event – Tan-y-Ddraig

or Dragon Fire now has its own web site at: www.dragonfire.org.uk You can now download the program brochure and book. Do not leave it too late for your booking! Remember that as well as attending this event, we will need a lot of helpers. We very much need people who can help as stewards, tellers, cooking, running stalls, doing circus tricks, conjuring, and running children's activities. Please contact me ASAP if you are able to help with the preparations for this event. JN

BUDGET NEWS

The duty differential of 20p for biodiesel is being guaranteed for a three year rolling period. This means the differential will remain until at least 2007 and that we will have at least two years notice of any change. Bioethanol is set to receive the same 20p differential from Jan 2005. Unfortunately the government is still in love with LPG and natural gas as vehicle fuels. They still get an equivalent of 40p duty differential (reducing by 1p for LPG) as well as subsidies for vehicle conversion. It seems lost on the government that these are still fossil fuels.

Good news for electricity generators, they will no longer pay any duty on bio-fuels used in diesel engines from Sep 2004. One consequence of this, however, is that it will provide underpinning to the price the fat collectors receive for used fat, even when the animal feed ban comes into effect. However, the price will be considerably lower than they have come to expect and they may find it uneconomical to collect.

The government announced it will enter discussions with stakeholders in the bio-fuels sector over changes to input based taxation and enhanced capital allowances (ECA's) to encourage investment in the most environmentally effective technologies. We clearly need representation in these discussions. What Gordon Brown means by changes to input based taxation only he knows, but ECA's allow capital expenditure to be written down more quickly than otherwise allowed. Depending on the detail this may mean that the entire cost of new plant can be offset in the same year against income, reducing the tax bill immediately. Normally only 25% of the cost could be offset in the first year, leading to more tax now. This measure is essentially about improving cash flow when making investments into plant. If you have no cash to invest it doesn't help.

One interesting snippet was the suggestion that the government could introduce a Biofuels Obligation for the transport sector. This would probably be run in a similar fashion to the Climate Change Levy (CCL) (right – that makes it totally clear then) where transport businesses are additionally taxed, but this tax is then set aside and redistributed to biofuels schemes. An example could be subsidies for engine modifications for biofuel use. The only fly in the ointment would be the inevitable drain on such funds by the quango designated to distribute the money. Most of the CCL appears to have been eaten up by salaries and “strategy reports” in the Carbon Trust. *Marc Thomas.*

Meeting of the Makers – Stoke on Trent

Last month we held a very productive Meeting of the UK Fuel Makers, at the Cobridge Community Multi-Cultural Association Hall, Stoke-on-Trent. The draft minutes have been circulated to those who attended and to all who were eligible to attend the meeting. One of the things we discussed was a new form of structure for Bio-power which would ensure that members do follow the ethical principles we all share, rather than setting up as sole operators. The effect would be to introduce a new level of membership, between attending the Introductory Seminar and becoming a full charter member.

We now have the definitive bio-power logo

Thanks to Brian Barnes for redesigning and improving our bio-power logo. The final format can be downloaded from the bio-power members web site, and it should be used for our corporate publicity, for example for letter headings, adverts, invoices etc.

Your waste - our commodity.

A new approach to the careful use and management of cooking oils.

Presentation to the Symposium on Waste Management and Renewable Energy, Hong Kong
4th February, by John Nicholson

What will I speak about to-day?

Yesterday I spoke about the way I was drawn into the making of bio-fuels, and how this has taken me on a journey of discovery. There are many themes in that story that I will pick up, especially regarding the impact of a new bio-fuels industry upon those working in catering and food processing.

I have also been asked to describe how I am involved with setting up a network of bio-fuel makers in the UK, and how this business is taking quite a novel form.

Finally, I will look at the situation as I understand it in China, because there is a very great potential for bio-fuels and bio-energy projects in China, BUT the application of this technology may be very different to the way it can be taken forward in the UK or Europe.

The fat bin tells us a lot about canteen management

The collector of cooking fat soon learns a very great deal about the way any kitchen is run. Some provide very clean, clear, runny, translucent, golden amber fat. For others the story is not so nice. The fat bin can too easily become the place for all kinds of rubbish. Some kitchens provide lots of fat, others very little indeed.

What sort of fat do we find?

It is almost universally true that those who provide lots of fat also provide the best quality, and those who provide ghastly black fat also provide very little in quantity. It is not a nice thought that this black tar was last used to cook someone's dinner. The worst fat of all is the fat we collect from the largest county hospital canteen (where my wife works!). This is followed closely by the fat taken from the canteens of some of our secondary schools. Why do we allow the food prepared for children and people in hospital to be cooked in fat with an excessive free fatty acid level?

Looked at from the catering managers point of view, fat is simply a cooking medium. It is not served as a food material. It has gone up in price by over 60% in the last 18 months. It is expensive to get rid of and the fat collectors seem to charge more and more at each visit.

Some restaurants do not waste any fat at all. They simply to make up the loss of fat with new fat. Schools only change the fat three times a year at the end of each term. They top up the fryers with new fat, mixing it with the old.

Therefore the policy is to use the fat for as long as possible to get what they think is the best value in terms of number of meals cooked per litre. Whilst this may make some sense to the fat user, it does not make sense economically or environmentally.

When we go to Chinese restaurants it seems there are distinctly two kinds. Some have hardly any fat at all. Others have plenty and it is quite clean – but sometimes a touch orange or golden in colour. Is that because of additional sugar in Chinese cooking? Why this difference?

In the UK it is largely maintained by our insatiable and decadent appetite for chips. I suspect we will go one eating chips for a long time yet. But I do notice a swing towards potatoes baked in their jackets and also to baked potato wedges which are seasoned with spices.

I suspect that genuine Chinese cooking actually uses very little deep frying. In mainland China (as in India) the cost of

oil is quite high. It is therefore used sparingly and carefully. Deep frying is basically an extravagant and expensive process.

My guess is that chips are not so much a staple diet in China as they are in Europe. But a much broader range of things are cooked in deep fat, like doughnuts and coated meats, fish and vegetables. In all of these applications the use of good clean fat is essential to maintain the delicacy and quality of the food. It is therefore necessary to change the fat often. I also suggest that these foods are generally cooked at lower temperatures thereby preventing the fat from breaking up and releasing short hydrocarbon chains.

Have you ever thought why it is that you can smell cooking at such a distance? The process of frying actually breaks up the triglyceride fat molecules. The three strings to the balloon get twisted and chopped up. Some of the broken pieces reform as longer chains (making the fat get darker in colour). Others are so short they are volatile enough to evaporate or fly out of the fat as a vapour. This volatile fat can be explosive and can cause serious fires especially if there is any steam around. It also condenses on the walls of your kitchen making them yellow and sticky. The effect of chain shattering is reduced if lower cooking temperatures are used.

Palmitic oils are more resistant to damage at higher temperatures. They are used in 'extended life' fats. These oils have the ability to maintain their form even when subjected to much higher levels of thermal stress. For this reason the average chip shop in the UK uses pure Palm oil which is delivered in solid blocks and is then melted to form the cooking oil. As I said before Palm oil holds more energy than rape seed oil but it is solid at ambient and this causes problems in use as a vehicle fuel. But it can be used as a generator fuel.

Two types of chip cooking

In the UK chips are sold in two different situations. The average corner chip shop buys potatoes in bags with their skins on. They are peeled by machine and chipped in a multiple slicer, then stored in water to draw the starch, until they are needed for cooking in at least two stages. The chips are kept in submerged baskets so they can be lifted out to drain and allow the fat to recover heat. The cooked chips are served in paper to help absorb the excess fat. *The skill in cooking the perfect chip relies upon getting the temperature just right so the inside is soft but the outside is just crunchy. The precise quality of 'the perfect chip' is very much a matter of local controversy. The quality of chips varies all around the UK, and in some areas there is a clear preference for the use of beef dripping as a cooking medium.*

The other situation is where chips are sold in pubs and restaurants. The British Pub has changed very much in the last 20 years. Pubs used to be where people went to drink, talk and relax, and the only form of food might be nuts or crisps. There are now very few pubs like that.

Pubs have become much more 'food led'. They provide a wide range of traditional foods, which actually means many un-traditional things like spaghetti curry, ravioli, and burgers. But these places do not buy in potatoes like the chip shop. They are supplied with ready prepared frozen or dried chips which are factory made. They are quickly fried as required,

and are served much drier on a plate. These places generally use rapeseed oil as the cooking medium.

It is this form of oil that lends itself most readily for use as a bio-fuel using our method. The palmitic oils used by the corner chippy is better used in the form of a free ester or heated and used to generate electricity.

Because of the different uses for these types of fat it is important to the fuel maker that they are not mixed.

A much needed change in the culture of fat use and management in the UK

Most large restaurants, especially those that operate as part of a nationwide chain, maintain critical standards. They change their fat regularly and provide us with much good quality fuel stock. Others (like the schools and the hospital) do just the opposite. So concerned are they to get the best value out of their fat they beat it to death. We are very concerned to bring about a significant change in the whole culture of fat use and management in the UK.

Why does used fat make a better Bio-fuel?

It is remarkable that used oils make much better fuels than virgin oils. Why? Some important things happen to oils when they are used for cooking.

There may be several reasons for this. I suggest that the oil responds to the stress of cooking in two ways. It can shatter the bonds that link the carbon chains releasing short chains. These can fly out of the fat liquid as a vapour, or they can re-join to make longer chains creating a tar like structure. The chains can also cripple upon themselves creating double bonds which in turn allow the fat to store more energy. Either way, the result can be a greater potential of stored energy.

But there is another reason why used fat is better as a bio-fuel. Natural fats contain a variety of molecular forms. But the variety of forms is increased as the triglycerides become more stressed or damaged by heating. This means that some will be more unstable than others which may actually contain more energy, but they continue to hold on to that energy tighter. The more volatile shorter chained molecules will explode and release their energy more quickly when introduced into the compression chamber of a diesel engine. In so doing they will give off heat and also increase the pressure inside the chamber both of which will rapidly encourage the remaining molecules to explode. The shorter chained molecules act as a detonator. The spread of molecular forms within a fuel is very important to the burn efficiency. This is a major consideration in the blending of fuels for optimal performance.

Other useful oils in Bio-fuel manufacture

For this reason, taxation incentives in the UK encourage the re-use of used fats as bio-fuels, as opposed to the use of virgin oils. If virgin cooking oils were allowed as bio-fuels then this could have the effect of driving up the cost of a raw material which is a basic food commodity. This would have a profound effect upon those in poorer areas where vegetable oil already commands a premium price. Conversely, encouraging a second use value for cooking oils discourages the waste of this material by improper means of disposal.

However, this does not mean that bio-fuels should ONLY be made from second use material. There are many other forms of non-food quality oils that can beneficially be used as bio-fuel stock. I have before mentioned the importance of palm oil which is semi-solid at ambient, but forms a clear runny liquid as a free ester. Palm and coco-nut plants produce a variety of oils which do not have a high value as food, but they do have a high levels of energy. There are

also many tree oils like turpentine that make excellent fuel additives in their natural form.

One of the most surprising and valuable oils is terpene or citrus oil derived from orange peel. Cooks will be familiar with the use of 'zest' from the skin of an orange. This is a short chained volatile oil. If you keep your orange peel and allow it to dry carefully in an onion bag, then set the dried skins alight you will be surprised by the way it catches fire. When I demonstrated this effect on one of our seminars I set all the fire alarms off.

In areas where oranges grow there is often a surplus of orange peel especially when the output is purified orange juice. Orange peel does not compost well, so it is often buried or simply set on fire. There is now a valid market for this material. The problem is persuading these people not to burn it, but to sell it.

A pragmatic business approach

It is by the combination of the more interesting natural fats like these and a few other materials with waste cooking fats that a viable bio-fuels industry is born. But it is very much just the first stage in quite an exciting journey. If people are considering starting a new venture, their success is very much a matter of how quickly they can recover their costs from their profits. The lower the initial setting up costs and the quicker the point at which profits can be made, the more likely the business is to succeed.

For this reason, the beginner bio-fuel maker should be encouraged to select those fats that lend themselves most readily to the process, so as to keep the capital cost in plant low and the repayment period short. We therefore tend to simply strip out the most useful fats by a process of decanting, and send the opaque fats for use as a generator fodder. This way it is possible to set up a new venture from scratch and get a turnover within a few months, subject to getting suitable premises. The cost of the equipment we use is relatively low, and most people in the Bio-power Network have made their equipment from recycled industrial containers.

How did the bio-power vision come about?

It is in this situation that the bio-power concept emerged as a way of implementing a nation-wide network of Bio-fuel makers in the UK, so as to optimise the opportunities as quickly as possible. This vision has become a reality in less than one year.

Recycling is a form of business that works well on a small local scale. But people tend to want to buy fuels through well established and recognised brand names. Bio-power operates through a network of locally based small companies, each of which collects the energy stock within their local area, and sells the fuel to meet local demand.

However, the corporate image is of a nationwide company. The quality of the fuel is the same from one local trader to the next, just as a customer would expect the same quality of product and service at MacDonald's anywhere in the world.

The network concept was a means to disseminate the technology as quickly as possible.

What is Bio-power?

Bio-power is both the name of a product – our range of fuels, and it is also the name for the way in which we work. Our structure is the opposite of the culture in business that results in a small number of very large and powerful multi-national companies. Bio-power is a network of many small locally accountable companies.

It started as a Trade Association, and quickly became a franchise. But unlike other franchises, it is a company that is owned by its members. So there is no 'fat cat' getting rich from the sale of the franchise.

How does Bio-power work?

Bio-power operates as a 'not-for-profit' company, so there is no share dividend. Anyone can join us as a member, but we cannot be taken over, or bought out. We are not a charity, and we can pay our staff and directors. Any profit accrued is used to further the aims and benefits provided to its membership.

An essential part of our way of working is the Bio-power charter. This document sets out our shared aims. Our principal aim is simply to provide real alternatives to fossil fuels. If all the members share the same aim to promote and facilitate the development and use of bio-fuels, then they can work together to achieve those aims. It is the only prerequisite for membership. The Charter facilitates co-operation and reduces competition. The Charter sets out how we aspire to achieve that aim ethically, socially and economically.

As well as developing a network of Local Agents like a form of franchise, there is also a network of technical working groups. Any member can join any number of working groups to which they may contribute skills, services, and information. Or they may simply wish to learn from the process of a group activity. These groups take on defined tasks like, publicity, chemistry, engineering, testing, dealing with the media, running events and functions etc.

There is also a network of regional cells to which any member who feels related to that geographical area may join. These cells are autonomous and may make decisions about issues of local or regional importance, like pricing policy, who will collect from which area etc.

What does Bio-power do?

Bio-power's primary aim is to provide to the public real alternatives to fossil fuels. Initially this means vehicle fuels, but we also make heating fuels and generate electricity. We are also involved in setting up all kinds of bio-energy projects.

Bio-power is there to serve its membership. Initially this means through training and helping set up plant. There is a very great deal of technology exchange within the Network. Everyone has something to contribute. Bio-power sets what are acceptable standards, and helps its members to achieve those standards. It is through the regional cells that issues of co-operation are dealt with.

Our product and methodology is under constant development. The most exciting project currently is the use of fat as a fuel in petrol engines. So far our fuels are a replacement to diesel.

Many of our members are also professionals in the media or advertising or Internet technology. Bio-power has been on European Television on many occasions and we get hundreds of e-mails every day.

Bio-power also helps the whole membership by dealing with environmental and regulatory issues. In the UK there is a strong regulatory structure, and the management of used cooking oils is subject to close scrutiny. However, one thing that soon becomes clear is that the rules are interpreted and applied very differently from one region to another. This is quite unacceptable. Any regulations must be applied universally and uniformly. If a decision is made to allow or enable a particular process then this same process must be allowed in all similar situations. I can tell you that the regulators in the UK are far from universal or uniform.

Does it work?

The Bio-power concept has grown over a period of just over one year. The first introductory Seminar was held in November 2002, and they now are run every two or three weeks. Over 100 people are now setting up in the UK as local Bio-power Local Agents. They will collect energy stock and make fuel to meet local needs, as part of the Bio-power Network. We are also working on 20 bio-energy projects overseas, some small, some not so small.

What is waste?

One issue that came up very early in the development of our work is the need for a clear definition of 'waste'. We actually had to push a parliamentary question to get this matter clear. It may become an important issue here.

Waste is a material that goes down in value. A commodity is a material that has a potential to go up in value.

We all create what is a waste to us. But that material, if presented to a market can become a commodity.

Our task is to ensure that our waste materials can be found a new value as a commodity and therefore be taken out of the waste stream. In an ideal world there would be no waste. There is no purpose served by allowing materials to become waste. There are many examples of second use. A saw mill may cut up trees and make building timbers. The waste branches can be used to make fencing posts. The outer parts of the tree can be used to make fencing. The saw dust can be used for animal bedding, and the off cuts can be sold as firewood.

Why do we need a change in attitude?

We need to create similar diverse patterns of use to optimise the materials available to us. In the case of used cooking oils, this means that the energy value has an impact upon the value of the oil as a cooking medium. What was a waste disposal problem is now a valuable commodity in its own right. But it ONLY has a value if the fat is managed properly.

Mixing all kinds of fats and kitchen wastes de-values the fat. Like all recycled materials careful separation is essential, and the earlier in the pathway that separation can be achieved the better. This may involve breaking some old habits!

Now let us again look at the two types of fat user. On the one hand the canteen that changes their fat regularly, and provides plenty of clean but used fat. They can benefit immediately from the increased value of the used fat. This means they can offset the cost of new fat by the value gained from the collection of the old fat.

But the canteen that goes on and on cooking in the same old black tar. Without a major change in their fat management regime, they will not be able to benefit from the development of a bio-fuel industry.

The lesson is that fat management can make a lot of difference to the profitability of a restaurant or canteen.

The Bio-power Responsible Restaurant Scheme

To assist this change we have started to introduce a new system for the supply and collection of cooking fat, and we call it 'The Responsible Restaurant Scheme'. It is a win win win system. Under this contract we actually give the fat to the canteen. It remains our fat, not theirs. We allow them (for a fee) to use our fat, so we supply the fat as a service. They can change the fat as often as they want. Every day if necessary to keep good quality clean fat in the fryers. The used fat is drained off through a pipe system to our secured collection tank. We have special access to that tank at all times and can collect the fat without disturbing the work in the canteen.

What does the scheme achieve?

- ?? The fat user benefits because they do not have to worry about ordering or changing their fat.
- ?? The cooking staff benefit because there is less risk of spillage or burns with hot fat.
- ?? The canteen manager is happy because the cost of running the fryers is a regular amount payable monthly.
- ?? Their customers are happy because the food is always being cooked in clean fat with a low free fatty acid content.
- ?? The Bio-fuel maker is happy because they get a regular and plentiful supply of fat and of a good quality.
- ?? The regulator is pleased to know that there is a complete audit of the fat so none is lost as a waste.
- ?? The environmentalist is happy because they can be sure that this canteen is taking care of the environment by proper fat management.
- ?? Participating restaurants are given a special sign that can be displayed to show they are part of the 'Responsible Restaurant Scheme'.
- ?? In many cases we also find that the businesses that use our fat under this scheme also want to buy our fuel. Can you imagine a more rewarding and worthwhile opportunity?

Where we have introduced this scheme it has been very well received. It ensures that quality fats that can be used as bio-fuels are kept separate from gelatine and dripping. Most importantly, the ownership and custody of the material is with the end user, and the restaurant is simply able to hire the fat as a cooking medium.

What can I do to develop better recycling?

This is a simple example of how it is both necessary and possible to change our ways of management to create new economic possibilities through efficient recycling. It is just a beginning. Everyone can gain through co-operation between those who have a different use requirement for a basic material.

Now think about all the different ways that this technique could be applied in your realm of work.

What happens to the compost?

What happens to the tins,

What happens to card and paper?

What happens to the bottles and jars?

What happens to the plastic waste?

Are there local organisations already around you that could take this material and bring economic benefit to your community?

Every one of these materials can hold a greater value IF there is a closer and active co-operation between the first and second users. This happens best through local community driven schemes where everyone knows each other, and where the operation is promoted through personal familiarity and trust. Local Authorities have an important role in facilitating this form of relationship.

'Re-made' schemes bring greater economic benefit

The most striking example of this is in the many 'remade' schemes now being developed throughout the UK. This is a means to enable urban communities to derive maximum benefit from the recycling of materials that are created by the community. Part of this is the strategic collection of potential bio-energy stock to make fuels that can be used by local authority vehicles, the waste collection vans, busses, ambulances, and council vehicles. This way Local Authorities set an example of better practice to the public.

Opportunities for China

In China there are not huge reserves of fossil fuels. A large proportion of the fuel used in China is imported. There is also a rapidly increasing demand for diesel because of the economic growth and the expansion of trade and demand for manufactured goods. China probably leads the world in the recycling of many materials – like paper for example. But China could benefit enormously from the strategic development of bio-fuels.

John Nicholson February 2004

The beginning of the end for 'Red' diesel

In three years red diesel may no longer be available to recreational boaters. The special exemption that allows the UK to charge lower rates of duty on diesel for private pleasure craft is due to come to an end. The RYA is fighting this and is currently carrying out research that will form the basis of our lobbying efforts. A questionnaire will be available on the RYA stand at the Schrodgers London International Boat Show and on the RYA website as the RYA urges boaters to voice their views.

The European Union has adopted a Directive that restructures the taxation of energy products, including diesel, in order to reduce perceived distortions of competition between Member States. At present diesel fuel for use in private pleasure craft is subject to duty at 4.22p per litre and to a reduced rate VAT at 5%. The derogation that allows this reduced duty rate is due to expire on 31 December 2006. Red diesel will still be available for commercial use but will not be available to non-commercial users.

There are three scenarios that can happen.

1. The current arrangement is maintained.
2. The rate of minimum duty as specified in the Directive is applied at 21.21p per litre. The reduced VAT rate is then applied at 5%. With a base price of 27.8p per litre, diesel for marine users will cost 51.4p per litre. The fact that the UK charges exceptionally high rates of duty on road fuel means that this diesel will need to be an alternative colour, to distinguish it from "commercial diesel" whilst still discouraging its use in road vehicles. The cost implications of having a third category for recreational use will mean that scenario 2 is impractical and unlikely to be supported.

3. The third scenario is that there will be no concessions for recreational boaters and diesel for marine use will instead be grouped with road fuel. At a base price of 27.8p per litre, duty as road fuel at 53.2p per litre and VAT at 17.5% this will take the cost up to 95.2p per litre. This is significantly higher than at roadside pumps due to the costs involved in the logistics, but the differential between roadside and waterside is comparable with the present situation in which roadside petrol is 78p per litre and waterside is 92p per litre.

The RYA believes that the best possible outcome for the recreational boater will be if the current arrangement is maintained and the derogation is retained (scenario 1). If the derogation is not maintained the cost of marine diesel in the UK is likely to be considerably higher than Europe. The impact of such a substantial rise in cost will hit the recreational boater hard.

In 1998 the RYA compiled a report and lobbied Government for the initial derogation and was successful. In January, February and March 2004 the RYA will be researching the impact of a price rise, and compiling a report based on the findings with which again to lobby Government. To do this the RYA needs input from as many people as possible who will be affected. *Article spotted by Bio-power member Ted Marynicz*

The true cost of diesel! An article originally prepared for publication in the journal of the Royal Yachting Association, by Bio-power member Brian Barnes

I love sailing and I am trying to hasten my transition from coastal skipper to Yachtmaster. The cost of my sailing is obviously something I think about but I am in favour of high street prices or higher for diesel! Why?

We all like cheap commodities but with non renewable energy sources the true cost is at the expense of the environment. All fossil fuels create global warming and through spillage and pollutants released when combusted, contaminate our sea and our waterways. By the end of the century there are estimates of up to 1m rise in sea level leaving millions homeless.



I for one would welcome realistic taxes on the fuels that do the most damage. I am part of an organisation trying to promote the use of modified waste vegetable fat as a diesel fuel. I currently run my Audi A2 on it and when I get a yacht I will be running that on it too!

Vegetable fat is carbon neutral (i.e. doesn't contribute to global warming), it is renewable, it lubricates the engine better, it has much less pollution, no heavy metals and if accidentally spillt, it just bio-degrades.

While people can use extremely cheap polluting diesel there is no incentive to seek out cheaper less damaging alternatives. It is ironic that the marine and farming environments are the two areas that would benefit the most from an environmentally friendly fuel yet taxation ensures that the wrong choices are made. The marine biology would be less damaged and our food harvested by cleaner vehicles. The government have reduced the tax on bio-fuel to 20p per litre below ULSD (currently 47.1). We would like it to be zero.

As sailors we love to feel a (clean, fresh) wind on our faces and steer a course through a virgin sea. The next time the wind drops and you argue about how much you pay for your diesel think about a cleaner alternative....or the 10 million people in Bangladesh who live within 1m of sea level! *Brian Barnes.*

News from our members

News from Bio-power Hereford

Congratulations to Marc Thomas , Tim Harrison and Jenny Wang for signing up over 130 Fat Users with Bio-power in the Herefordshire area.

Herefordshire is not the most heavily populated area, and we expected that finding enough people to supply us within our catchment area would be a big problem. We started last December and have signed up over 30% of the producers we have contacted. We now collect throughout Herefordshire and the Forest of Dean. Most places are not massive producers and we still need to sign up several hundred more, but this is a very encouraging step on the way to a strong local business. We face a big challenge in organising our collection schedules and never missing anyone out. However the key to this business is to achieve a near monopoly on the fat collection, while keeping collection costs down. This is easier said than done when our producers are so spread out, but our future success as a profitable enterprise depends on it. *Marc Thomas*

Hi John,

This is Stefano from Italy. I've just read about your trip to Hong Kong and even in this occasion it came out how you are craving for food all the time! (Beside the fact that jelly fish sounds disgusting to me...) I can only imagine what could do for your Italian cuisine!

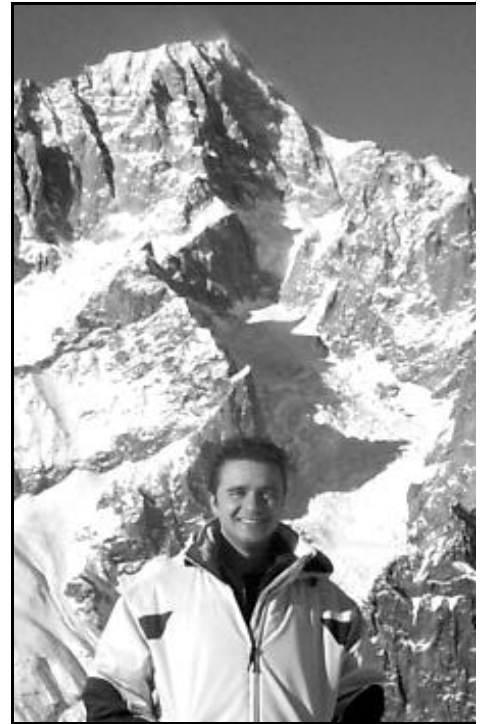
I've finally finished the course I attended for more than a year, examination done and now I really feel free to dedicate myself to MWVF.

I have to meet some people who are part of a co-operative society that mainly operates on fair-trade. I've had already some preliminary chat with them and they are very interested. The main problem to me is to find a place where to experiment as I live in a very small flat and maybe they'll help me.

I often think that my area is the best place for producing on an industrial scale your fuel as it is full of abandoned firms and is quite easy to find the 1000 liter containers that are needed.

I don't want to waste your precious time anymore, I'll keep in touch and I let you (hopefully) my progress. No need to remind you that you can come to visit me any time you want with your family (and can be quite a chip too as you'll be my guest).

Give a hug to Bethany, Bryony, Bella and Paula. *Stefano (Italy)*



Grease Summit

Last month I also attended 'The Grease Summit' at Brentwood, which was a very informative presentation arranged through Aziz Tejpar of Environmental Bio-tech. Despite an architectural training, I had no idea of the scale of problems that can be caused by bad practice in grease trap design, installation and servicing. Aziz has a talent for developing new businesses, and he has a vision for the provision of fat and removal of waste from large Fat Users throughout the UK. I very much hope that Azia will speak to us at one of our next meetings. *JN*

Members stories!

Sorry to clutter our email, but I thought I'd send a photo captioned "in need of a free collection service". We collected 470 litres of relatively clean oil from this one shed where the landlady said she "had a few cans".

Marc Thomas (Hereford)



The Bio-power Seminar Program

Technical workshop	23 24 25	April	
Introductory Seminar	28	7 8 9	May
Maker's Meeting	3	15	May Gloucester area
Technical workshop		21 22 23	May
Introductory Seminar	29	11 12 13	June
Introductory Seminar	30	12 13	July Tan y Draig Energy Event
Technical workshops (Llanberis)	14 15	July	Tan y Draig Energy Event

Envirenergy, 2004 6 October, Royal Armouries Museum, Leeds

Envirenergy 2004 is a free to attend conference and exhibition for the region's energy and environmental practitioners, hosted each year at The Royal Armouries Museum, Leeds on 6 October, focussing on energy and environmental management, it's a one-stop-shop for anyone active in energy and environmental management.

Envirenergy is a great networking occasion too and, supported by Yorkshire Forward. It could be more costly NOT to come along if you miss out on the many new business opportunities, energy-saving and cost-reduction measures the event presents. It seems like we need to have a Bio-power presence there. Can those in the Yorkshire and Durham area get together and get a stand running? Maybe this same stand can be the one we link up with Andy Hope and the 'Green Road Show'. Contact Claire Horsfield at organisers Washington Dowling Associates Limited for further information, 01257 276 277 / 276 176 e-mail: claire@washingtondowling.com.

Bio-power News is produced and distributed to the supporters and members of the Bio-power community.

© copyright is held by Bio-power (UK) Ltd. Tanrallt, Rhostryfan, Caernarfon, Gwynedd, LL54 7NT 01286 830312