

bio-power news

Issue 7

October 2003



September seems to have brought a lot of media interest in Bio-fuels in Wales, and the Bio-power Network in particular. Kaye Angus and Daniel Blackburn took part in a feature on Newsnight which appears in this issue in transcript. Later, I took part in a recording in which BBC correspondent Roger Pinney also interviewed Mike Anderson the head gardener from Penrhyn castle in North Wales, where they use our bio-fuel in all their tractors and estate equipment. As a non-TV watcher it staggers me how many people seem to watch TV and recognise me on their screens - I felt quite a celebrity walking around the town the day after the broadcast!

The latest broadcast will be on the London based 'Resonance Radio' which you can listen to this Thursday, 25 September 2003, 19:00-20:30 Resonance 104.4 FM broadcasts across central London and streams live on the web at <http://www.resonancefm.com> This edition of BPN is a bit early deliberately !

Please complete and return the questionnaire on the last page of this BPN

STOP - PRESS!

Final Clear Spot on Climate Change – the last of three monthly programmes on climate change looks at some practical things we can do. Features a substantial interview with John Nicholson of the UK Bio-Power Network discussing the potential for vegetable fuels - rather than fossil fuels - to power UK road transport. <http://www.northwales.org.uk/bio-power>

The show also explores the role of campaigning in an interview with the head of Friends of the Earth's climate campaign, Bryony Worthington:

- What is the current status of Kyoto?
- What is the EU doing?
- How can the UK's remaining coal-fired stations be shut down?
- Should the UK taxpayer be supporting new oil developments?
- What is the potential for litigation cases against fossil fuel companies?
- Switching to green energy.
- How you can get involved.

News from around the world

New research shows that Bio-fuels enhance the lubricosity of fossil diesel.

The US National Conference on Weights and Measures (NCWM) has passed a new definition for Premium Diesel, and the changes are good news for Biodiesel. Lubricity is now a characteristic that will be considered in determining whether a fuel can be classified as a premium diesel fuel. Independent tests show just one percent Biodiesel can increase the lubricity of petroleum diesel by up to 65 percent. The NCWM list is now comprised of cetane, cold flow properties, thermal stability, and lubricity.

"This is an extremely important development for the Biodiesel industry since it makes it official that biodiesel's positive lubricity benefits are truly a premium attribute that both engine companies and users find valuable," said Steve Howell, NBB technical director. "It will become even more valuable when S15 [15 ppm sulfur maximum] diesel fuel hits the market." The changes will appear in the 2004 NIST Handbook 130. Source: Ms. Christine Paquette, Canadian Biodiesel Network News via the ABI.

ABI's COMMENT:

Lubricity was so far not considered as a criterion in fuel standardisation, which may change now with the ever increasing complexity of fuel injection equipment. As Biofuels have by nature excellent lubrication properties it can contribute to smooth engine operation specifically when fuelled by low or ultra low sulphur fossil Diesel in blends. More details will be represented by Mr. Joe Jobe, director of the NBB (US) at the 4th European Motor Biofuels Forum on 24 - 26 November 2003 in Berlin. More information from: <http://www.europoint-bv.com/events/biofuels2003/index.htm>.

JN's COMMENT:

Some people are already selling MWVF in small containers intended as a fuel additive or sampler for those who are otherwise running on mineral diesel. The response is generally that even a small amount of MWVF when added to Derv will improve performance. This supports the British government's position to encourage the use of Bio-diesel as a 5% blend. However, it does very little to enable environmentally aware people to do all they can to address the real issues of Global Warming. It is tragic that most people's attitude to their cars is all about performance in terms of speed rather than the effect that fuel use has as one of the major contributory factors to climate change.

FARMERS can benefit from new moves to encourage the greater use of biomass- powered generators in Britain. The proposals outlined by UK energy minister Stephen Timms in a consultation document will mainly benefit farmers who grow energy crops and power stations which burn a combination of biomass and fossil fuels. There are also proposals to enable individual households or community buildings with solar panels or wind turbines to be able register their systems and benefit from the renewables subsidy. "Power generators and farmers now will have greater certainty when investing in energy crops as a fuel source," said Mr Timms.

"And even the smallest generator will also be able to benefit from the renewables revolution.

The main measures include extending the eligibility of power stations to benefit from Renewable Obligation Certificates by five years to 2016 and raising the current limit of eligible biomass that must come from energy crops from 25% to 75% between 2009 and 2016. The proposals also aim to reduce the 25% cap from co-firing on an individual supplier's obligation to 10% from April 2006 until the end of March 2011 and to 5% for a further five years in order to cut the risk of flooding the market with ROCs.

The Renewables Obligation, which began in 2002, set out targets for energy suppliers to source an increasing amount of their energy from renewable resources. Certificates, or ROCs, are awarded to suppliers using renewable sources, allowing them to demonstrate their compliance with the targets. These can be traded between suppliers to make up any shortfall. The new moves will mean farmers have more time to plant and harvest energy crops, creating a greater incentive and certainty to the developing energy crops market.

The Government also plans to allow small generators, like households or community buildings with solar panels or wind turbines, to benefit from the ROCs market. Currently generators only qualify for certificates if they produce at least 0.5 MWh in a month. Smaller generators, who do not produce this much surplus in a month, will be awarded certificates based on their yearly output. Mr Timms described the proposals as a significant boost for green fuel and the renewable energy market. And he said the review would help the Government to fulfil its target of producing more renewable energy and reducing carbon dioxide emissions.

A full review of the Renewables Obligation will begin in 2005-06 after the system has had time to develop and adjust to the impact of the European Emission Trading scheme, which begins in January 2005.

Biofuels

This transcript was produced from the teletext subtitles that are generated live for Newsnight. Story from BBC NEWS: <http://news.bbc.co.uk/go/pr/fr/-/1/hi/programmes/newspnight/3077848.stm>

Sometime soon the government is going to tell us what it believes we might be able to do to cut the massive quantities of greenhouse gas pouring from the back-ends of our cars. The solution, according to some people, is to use vegetable oils instead of diesel and petrol. Some people have already angered the authorities by going down to their local chip shop, emptying the vats, and putting them into their tanks - thereby depriving Gordon Brown of his hefty fuel tax. Nothing gets the BBC's economics editor and Newsnight alumnus Evan Davis as excited as fiscal implications.

EVAN DAVIS: A few days out of the city to the clean air of South Wales. Driving and eating - two routes to personal fulfilment in western society. Here, they've found a way of marrying the two. The town of Burry Port hit the news last October when police found that several local people were using vegetable oil to help run their cars, illegally as it happened, without paying the requisite duty. The case inevitably spawned punned headlines, talk of the frying squad coming into town, but it actually raised some rather serious issues - where there's fat there's fuel. In fact, around the counties of Carmarthenshire, Pembrokeshire, we found several devotees of bio-fuel. Devotees who pay the duty but just think vegetable is the green way to fuel a car. I popped in on Kaye Angus whose car runs on waste cooking oil. She lives in this truck and wants to get that on to a vegetable diet too.

KAYE ANGUS (Bio-power) I'm totally determined to keep at it but I don't want to have to cost the whole engine so I have to be careful about what I experiment with and I have to be careful about the risks that I take.

EVAN DAVIS: But you swap your stories with other people and you're kind of swapping ideas...

KAYE ANGUS: Yes, we keep at it, and it's just a process of investigation and experimentation.

EVAN DAVIS: The point is that vegetable oil is good for the planet. Yes, it produces carbon dioxide as it burns - but plants take carbon out of the air when they grow. So with bio-fuels, carbon circulates between solid and gas. With petrol it goes one way - from solid carbon into gas. A few miles away, I called on Daniel Blackburn. He's driven his car from Land's End to John

o'Groats; he uses fresh cooking oil from the supermarket. Then he gave me a taste of the car's performance, so to speak. It worked fine. Bio-fuels do work - although be careful before you try them at home. You can damage your car. But this is not just a home-grown activity - there's business interested too. It looks like diesel, smells like diesel and in fact it is diesel but with a 5% bio-diesel vegetable matter mix. The car doesn't know the difference, it doesn't need adapting, it doesn't upset the warranty and in one form or another it's available in over 100 garages in the country. Now if this is the start of a revolution, like all the best, the revolutionaries themselves are divided into factions, each passionate about their own particular cream.

So, pick your bio-fuel - cooking oil from Asda? If your engine has been converted. Then there's bio-diesel, drawn from oily crops like rape seed. Or there are the petrol substitutes, starchy plants can produce bio-ethanol. This can come from sugar beet or wheat. British Sugar are keen to get the market going. And whether it's bio-diesel or bio-ethanol, the safest idea for now is to blend them with traditional fuels.

MALCOLM FERGUSSON INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY: Up to a certain extent you can blend 5- 10% into conventional fuels and you can barely tell the difference and that's the easiest thing to do because we're not manufacturing anything like the quantities where we're going to supplant a large proportion of our supplies.

EVAN DAVIS: This isn't an issue that just matters for cars and carbon, it also matters for the countryside. At the moment we mostly use the countryside to produce food, often too much food. In fact we often pay farmers to set land aside and not grow food. If we could get farmers to grow fuel, that would be a real boost to the rural economy. It seemed like a good idea to get the farmer's point of view; Paul Radcliffe is keen. Paul, you really see this bio-fuel as one of the great new opportunities for the countryside don't you?

PAUL RADCLIFFE: I think it's an opportunity that needs to be grabbed. We are fairly environmentally friendly, most of the farming community. We are living - we are close to nature and growing crops for fuel is a lot greener than the refining fossil fuel.

EVAN DAVIS: At the moment bio-fuels get a discount on fuel duty, a 20p a litre discount. What everybody here says, it needs to be more.

PAUL RADCLIFFE: The cost of producing bio-diesel is more expensive than pumping oil out of the ground and refining it and the industry needs a start. I think taking the tax off would give the business of producing bio-diesel and ethanol the kick-start it needs to get developed.

EVAN DAVIS: Of course, fuelling cars takes quite a lot of land. This six-acre field would provide about enough rape seed to run about three cars. Each acre could support about 5,000 miles of diesel motoring a year. But you can improve on that. This crop is more energy intensive than rape and can create bio-ethanol.

MALCOLM FERGUSSON: You could grow most of the fuel we needed, probably on about a quarter of the agricultural land, which is an awful lot but it's not completely implausible.

EVAN DAVIS: A quarter of the agricultural land, you could probably grow most of the fuel we need?

MALCOLM FERGUSSON: Yes in the long term you might be able to do that.

EVAN DAVIS: This is the farmers' dream because at the moment there are huge surpluses of food aren't there?

MALCOLM FERGUSSON: That's the difficulty. Some would say we don't want new excuses to grow new crops because it is too intensive now and we should have less intensive and organic and so on.

EVAN DAVIS: Among the powerful lobbies lining up to give their view on environmentally friendly driving, there is one we shouldn't forget: the car industry. Far from conspiracies to keep us on petrol, they would love to give us guilt-free car trips. They have their own view of the future: hydrogen.

AL CLARKE (SOCIETY OF MOTOR MANUFACTURERS): There is no point in going a whole new way and trying to get the world to convert to some halfway house technology if the long-term solution is going to be hydrogen fuel cells. It is far more sensible to invest in the long-term solution, than put millions into a whole different range of technology that might just make it because we're talking about massive investment to make this work.

EVAN DAVIS: Of course it takes energy to produce hydrogen so the deal is we have to find renewable sources of energy to do that. The question is whether we should be doing something else in the mean time.

KAYE ANGUS: I've just bought a car for £300 and got some fuel at 65p a litre, which is made from the waste that comes out of the chip shop. There is a lot more money in making a new car and putting a hydrogen fuel cell in it and it being the latest carbon-neutral car. So the car industry is obviously going to look at something that is more lucrative. Not your everyday person can go ahead experimenting with hydrogen fuel cells.

EVAN DAVIS: Hydrogen, bio-fuels, of course they do have the potential to help save the planet but until we learn to run our cars on sea water or wind, the truth is they also have some cost. There'll be a financial cost and probably unforeseen environmental costs as well. That means there is another environmental argument, a pure green argument that says the real problem is, we are trying to consume too much and that rather than relying on technology to allow us to have our cake and eat it, we should just eat less cake.

DANIEL BLACKBURN: I can't say that I'm pure about everything but it is reducing your impact. It is a slow step by step process. You can't achieve everything but it is minimising your impact. This was a solution to my particular problem, working in a rural environment and needing a car.

EVAN DAVIS: In the long-term, the back yard fuel refinery isn't an answer. We can't all run our cars on chip fat, we don't eat enough chips. In the long-term hydrogen may be the answer. In the meantime when it comes to sustainable driving you can expect 100 flowers.

Eco car heads energy festival

A car powered by cooking oil is to be used as a leading example of green energy at an eco festival in West Wales.

Hundreds of people are expected to descend on the Pembrokeshire farm to hear about the advantages of bio fuels and renewable energy. The car - which earlier this year completed a journey from Land's End to John O'Groats - will be one of the attractions at the festival which aims to promote energy saving methods. Organisers hope the event will also encourage farmers to get involved in the production of crops which can be used as fuel.

Some of the ways of saving energy are so simple that we don't even think of them

Farmer John Quinn

John Quinn, host of the festival at the beef and sheep farm in Boncath, said: "We are trying to revive the local economy. "We are looking for farmers to grow bio fuels - which are fuels made from crops such as linseed and oil seed rape." The North Pembrokeshire Energy Group, who have organised the event hope to get more people interested in renewable energy. Mr Quinn said becoming energy efficient was easy: "Some of the ways of saving energy are so simple that we don't even think of them.

It is amazingly simple, you can save money and do something good for the environment as well *Daniel Blackburn, car owner*

"Buying energy saving bulbs, insulating the house, turning the heating down are all ways that we can save energy." Attractions at the event at Rhydhowell Farm include talks on windfarms, bio fuels, solar power and a presentation from Daniel Blackburn, owner of the vegetable oil powered car. Mr Blackburn, from Bwlch-y-groes, said substitute fuels do not have to affect performance: "It is amazingly simple, you can save money and do something good for the environment as well. "With the problems we are having with global warming we have to find alternative ways of using fuel which doesn't lead to a build up of carbon dioxide." "There was no noticeable loss in performance in the car and in fact I noticed better acceleration." Last year the forestry worker paid £550 for a conversion kit from a German company which he installed on his Citroen ZX 1.9 diesel turbo himself. Each month he informs the authorities how much vegetable oil he has used and estimates it costs him about 73p a litre - which is cheaper than diesel and perfectly legal. Around 5,000 cars in Germany are run on cooking oil and farmers in Ireland are also converting their machinery.

Story from BBC NEWS:

What are the undesirable effects you refer to with RME?

The 'undesirable effects' we refer to are associated with 'bio-diesel' created as a 'Fatty Acid Methyl Ester' (FAME), which is generally what people think of as 'bio-diesel', or specifically 'Rapeseed Methyl Ester' (RME). The undesirable effects do not relate to our form of bio-fuel which is called 'Modified Waste Vegetable Fat' or MWVF.

The problems associated with RME are as follows:-

- 1) RME is a very active solvent. This means that can strip the paint from the insides of fuel tanks - especially it seems of lorries, and that paint residue then clogs up the fuel filter causing fuel starvation and eventually engine damage.
- 2) The solvency also can lift the debris that otherwise accumulates on the bottom of fuel tanks and again this material can then clog up the fuel filter with the same results as above.
- 3) RME will dissolve natural rubber. This was formerly a problem with old style fuel delivery pipes or seals where rubber was used, however modern vehicles do not tend to use rubber parts. But problems have been reported to us where people experimenting with bio-fuels have over filled vehicles and then left puddles of RME on the garage floor where the rear tyre was standing. The vehicle was left for three days or so and then it was found that the part of the tyre which stood in the RME became so soft that it blew up like a balloon.
- 4) The manufacture of RME is a subtractive process in which potential energy materials are removed from the fat stock to alter the physical properties of the fat when used as a fuel. Mainly this is to reduce the viscosity of the fuel to make it the same as commercial fossil, diesel. There is no need for this as the problem would be overcome if fuel line pipe were made a little larger or a support pump fitted closer to the tank (like in a mini). The by-product material removed from the fat stock to make RME is glycerol creates a major waste disposal problem. This is a dangerous substance and has to be disposed of.
- 5) The manufacture of RME requires the use of Caustic Soda and Methanol, both of which are mineral chemicals, and both of which are toxic. Methanol is an especially unpleasant and dangerous material. Our simple process does not involve any chemicals or reactive chemistry.
- 6) From 100 litres of fat stock it would be possible to make about 80 litres of fuel by the RME method, which is about 85% as efficient as derv. From the same 100 litres of fat stock we can make about 115 to 125 litres of fuel which can be 105% to 120% more efficient than derv. A vehicle running on MWVF will therefore travel nearly twice the distance as a vehicle running on the same volume of fat stock converted to RME. RME production is therefore a waste of potential tractive energy.

For the above and other reasons Britain is being very cautious about the use of RME at 100% strength. There is a move to restrict the use of RME to a maximum of 5% cut with normal diesel. This makes a trivial difference to the carbon emissions. However our MWVF can be used at 100% strength without any problems.

News from Geoff Bell, Bio-power Norwich

I would like to say hello to all the other Bio-power fuel makers that are already up and running, and thanks to Bio-power Manchester for the opportunity to visit you earlier this year that was such an inspiration to us all. I am interested in the purchase of the Waukesha fuel testing equipment and would like to see the results of testing our fuel against Bio-diesel, Derv and ULSD. I hope this will provide us with scientific evidence that will prove what we already know - that our fuel is far superior quality than any other diesel on the market, if manufactured properly.

Bio-Power Norwich is now in production since 1st July 2003 when I began producing my first batch of diesel. The plant was set up in my home garage. Stormforce, pictured elsewhere, was happily tanked up with diesel and was itching to go for a run on our fuel. Bio-Power (Norwich) - The Fat Shed - had definitely arrived slap bang in the middle of middle-class suburbia in Norwich, Norfolk. In true Geoff Bell style I had said hello to the world of alternative diesel fuel production.



I'm making and selling fuel, initially on a very small scale because I neither have the space or finance to set up on a more commercial basis. Because of where I am there are further restrictions as to what I can do, but I should be able to turn over around 3000 litres per week comfortably without disturbing anybody. The filtration is taking longer than I thought so I may not be in full production now until the spring of 2004. Never mind, I'm learning all the time, and I have had absolutely no help at all from any government agencies or any funding from anywhere except out of my own pocket. In fact some agencies have actively tried to stop me from, or at least put me off the idea, of setting up. For somebody who is unemployed, that is some achievement. I'm here now and here to stay!

With reference to which Internet service I find best as mentioned in Bio-Power News. I currently use a service provider called totalserve.co.uk. Free unrestricted Internet access and e-mails. I just pay 1p per minute for the phone call through an NTL line. Some companies offer free unrestricted e-mail and Internet access but for a price of £10 per month, others offer a similar service to totalserve. I hate to say this but in my particular case companies like Freeserve and AOL don't stand a chance of getting me to use their services. I just don't spend sufficient time on the net to warrant paying £10 per month yet.

The format of the Bio-Power News is fine in "DOC" or standard "Outlook Express" format for me John. I can't pick out the colours in Outlook Express but I can in DOC format. *I am a bit puzzled by this comment Geoff, because I publish BPN in black and white only. Does anyone else get it in colour? JN*



Geoff on his personally designed 'Bio-trike' built in Wales,



The view from the back seats



The horned beast from the front

Stormforce is her name, and Stormforce is her nature. She was conceived and built in the rain and, so far, she has spent most of her time on the road, in the rain. She is built for comfort, reliability and strength and she's mine. Oh yeh, and she runs on bio-diesel, **our** diesel. Some of you have heard of her before, news travels fast amongst us vegi dieselites. Half of north and south Wales now knows of her too. She was made in Nantgawr near Cardiff and visited John at Rhostryfan for a couple of days. Half the village was duly treated to rides on her up and down the main street. She didn't take long gaining infamy. Most of Norwich have seen her too now. As far as I know, no accidents have been caused by people gawping at her yet but give it time. I'm sure that one day I'll here the squealing of tyres and crunching of metal somewhere behind me...

Anyhow, she is a damn good advert for our diesel, which I have to admit is a bit of a fortunate side effect of owning her. People nearly fall over when they see her. When I mention she runs on our diesel that clinches the fall over and people want to know more. This is handy for me because that is the market I'm aiming at for now.

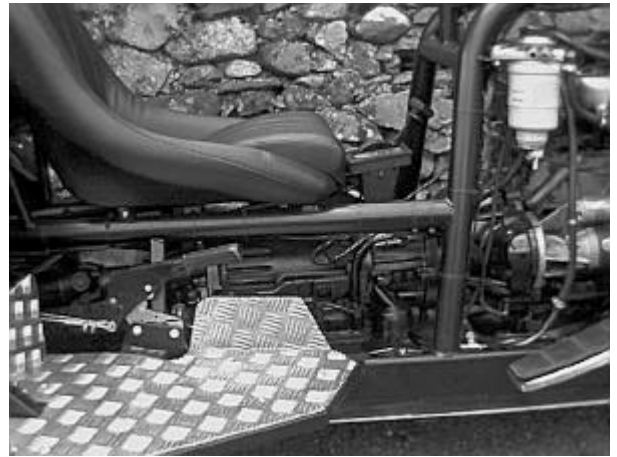
Those engineers amongst you will appreciate the engineering that's gone into her, if the pickies show it well enough. Those who are not, be rest assured that she is indeed good fun to ride and I love her to bits. Oh, and if you are wondering how fast she goes then all I can say is "How fast do you want her to go?" ¾ ton at 90 with

more to go, is that ok? She'll stop just as quick too... But the nice part is that she is quiet, and with an automatic gear box and potential for power assisted steering, she is very easy to drive!

STORMFORCE – Raw Energy To Respect

The day was cloudy, wet and horrible. I wasn't in a good mood either. I couldn't take my Streetfighter around the world because of a half knackered back. I put the music on and all started to be better. Then it hit me, like a bolt of lightning. "Stormforce". The name of an idea that hadn't even been thought about yet.

The weeks and months passed whilst I spent hours frantically coming up with ideas. I made and re-made designs like a madman. Eventually I had a plan. Hank at Trike Design, Nantgawr near Cardiff (01443-841793) was contacted and before long he, his team and I were talking face to face with each other. He probably still regrets that day...



If I can't travel the planet on my Streetfighter, I'll do so on a trike I thought. The spec was very simple. It had to be strong, reliable and comfortable. That's all Hank had to go on. I was happy with the engineering and skills of everybody at Trike Design and trusted them implicitly; so let them have free play on the actual design and building of Stormforce. What bigger compliment can you give a true engineering team? I'd seen their work and had heard much about them so let them get on with it. They're a busy lot over there, which proves that they are good and know what they are doing.

March 2002 came and Hank was commissioned to build Stormforce. I'd had an awful lot of well-deserved good fortune by then as well, so would have been a fool not to exploit this opportunity. It was well and truly exploited. The project could not be started until the winter due to a busy schedule so I was happy to spend the summer sunning myself and planning the first part of the journey around this planet. My mind was focusing on America.

Come the winter, an engine, gearbox, axel and drive shaft were found and metal had been bought. The engine, as it turns out, is a newly reconditioned 2.7l diesel item from a Nissan Terrano. The guy who owned the black taxi before me had just had the engine reconditioned before government laws forced him to sell it on. Good for me, but not for him. Thank you sir, whoever you are. The axel is a 2.8l Granada item, as is the much shortened drive shaft. The gearbox is an automatic item from the taxi.

Look at the photos and you will see lots of good engineering, see if you can find the 8-gallon fuel tank as well. No, its not the big silver box on the back.

I started life as biker on a Honda C50 twist-and-go. Being a rather tall guy, that must have looked somewhat amusing. I have owned several different styles of bike since, from "Normal" bikes, through factory customs and bullet proof Kwakers, to trikes and Streetfighters. It appears that I have now gone full circle. Honda C50s, eat your hearts out. This is the ultimate twist-and-go.

Throughout the Winter of 2002/2003 Hank and I were in relatively constant contact over the phone and by me going to Wales to see him and Rob. I must admit that my skills are very limited when it comes to bike building and this is the other reason I let them get on with it. My skills are more in the fields of electronics, electrics, computers and, more recently, alternative forms or diesel fuel manufacture. Who says you can't run a diesel engine on used chip fat... They're lying. Stormforce is living proof that you can, legally. She loves the stuff.

Late Spring/early Summer of 2003 turns up and I get a call from Hank. "Can you come and take Stormforce away please, my workshop is getting crowded."; or words to that effect. "Yep, ok. I'll be over in a few days time." Was my reply. I spent the next few minutes dancing and yelling around the house, after putting the phone down that is.

I made a few phone calls and all was set to go. I hadn't learned all I needed to learn about the diesel fuel so planned to see somebody I know in North Wales at the same time I was going to pick up Stormforce. Nantgawr near Cardiff, prepare for an invasion from Norfolk.

Much celebration and photo taking ensued at Trike Design. I crapped myself when I suddenly realised I had to ride Stormforce up to North Wales and then across to Norfolk in about three days. Not a problem to most but I hadn't even been able to try her out before then and was in a totally unknown part of the country so I was nervous. Having leaped into the riding seat, I was as happy as a pig in the proverbial and promptly roared off into the distance without a worry or concern for anything. I got to North Wales the end of that day and duly partied. No hick-ups, no headaches, nothing. She ran like a dream. She conquered every mountain she could find. Boy do you lot in Wales have some serious mountains... A beautiful place. I stood on top of the world, or so it seemed, and gazed across the land towards Mount Snowden. Fantastic.

I learned all I needed to learn about diesel fuel and came home without any problems, apart from getting lost a few times. Oh yeh, did I tell you I'm crap at navigation as well...

Thank you Hank, Rob and all the team. You've done a damn good job on Stormforce. I cannot thank you enough. And if anybody out there wants a trike building, you'd be a fool not to let Trike Design do it for you.

Did you find the fuel tank? Have a look under the big silver box at the back, just above the spare wheel.

So, will Stormforce be travelling the planet? Not until I retire now. It appears that I have found something worth pursuing that appeals to my sense of doing something good for this planet, all life on it and the environment we all crucially depend on. There is a lot to be said for this alternative diesel fuel stuff that is different to Bio-diesel and a lot better than any other form of diesel currently on the market. Oh, and if you want a Streetfighter that's a bit different and is effectively brand new, gimme a shout on 01603-741375. £2500 she's yours. No offers as she's had £8500 spent on her.

Hints and Tips

Bio-power supporter Gale Barker told us recently about an interesting new charity called "Green-Works" that relieves large corporations of surplus furniture, nearly all of which would otherwise go into landfill. It employs people from socially disadvantaged backgrounds to collect, warehouse, sort and clean the desks, chairs, filing cabinets etc., and then sells and delivers them to small businesses, charities, community organisations, educational establishments etc. at a substantial discount to the normal second-hand price (30-40% discount, equivalent perhaps to 10% of the price when new). Although a charity, Green Works is run as a commercial operation, and actually makes money.

This seems to be one of those rare situations in which everybody wins. The Green-works system allows big companies to get rid of redundant furniture efficiently and cheaply, in an environmentally responsible manner; it provides jobs and training opportunities for the unemployed; and it provides new businesses or not-for-profit organisations with low-cost, good quality office furniture at a fraction of the cost of new furniture. Potential customers should contact Green-works through the website and via telephone to find out what is available. Large companies pay a fee to Green-works to become Members, giving them the option to use Greenworks when they are moving offices or decide to replace their existing furniture.

Their current problem is too much furniture...the warehouses are bursting. HSBC wanted 8,500 items picked up before moving to Canary Wharf and Clifford Chance is also moving to Docklands so all their old desks and chairs are streaming in. What they now need are customers in their target categories, who will be able to benefit from the saving of expenditure on new products, as well as the compelling environmental case for re-cycling or re-using entire products! If you think you can help, please contact Tony Golding on 020 8400 1904 or tony@bedfordpark.demon.co.uk

PS Does anyone know of any similar organizations that specialize in reclaimed manufacturing or process equipment like tanks, pumps, vehicles etc. JN

I am now able to make MWVF fuel, but how do I become a registered Bio-power Agent?

This question is often asked by members who have attended our Introductory Seminar, and who have now progressed through the first stage of making fuel in their kitchen or garage, and now want to work within the Bio-power network on a commercial basis. The purpose of the first stage is to gain personal confidence in the fuel, and in your own ability to make a reliable fuel that works well in all situations.

Members are not allowed to trade as a Bio-power Agent without a written licence, which is rather like a franchise contract. This is not granted until a number of criteria can be met. Normally this will involve a site inspection, an examination of the equipment used, and also an inspection of the quality of the fuel product itself. The fuel can be inspected through samples sent in the post, but we do also carryout covert sampling. The whole Bio-power Network is very much in it's embryo stages of development, and we do not yet have in place anything like the structured evaluation procedures that will be essential to maintain the commercial credibility of the network as a whole. At this stage things have to be done very much on the basis of trust and understanding. However, there is a written contract that operates as a licence, allowing people to operate as Bio-power Local Agents, and this is subject to renewal and to withdrawal at any time if criteria are consistently not met. The licence covers the use of the name 'Bio-power' and the use of our trade marks and symbols. It also grants the operator a specific geographical area which is described in the name under which they can operate. This area may be determined by agreement with the local or regional cell of Biopower in which they fall. The purpose of this is to ensure that we do not create situations of competition, and that each Local Agent is recognised as operating collaboratively.

The grant of a license also covers the use of the Bio-power process, and the use of our mobile processor facilities when they become available, and the use of the Bio-power registration for the carrying of waste materials. Some members have already registered independently with the Environment Agency, but Bio-power is registered nation-wide.

Your Messages

Can I say how impressed I am with your site on Bio diesel? As an engineer the way you have put it together with useful information is really impressive. Have you any contacts that have used the fuel in Isuzu powered Vauxhalls?

Regards Steve

Many thanks for your message with HO 930 advice re. tax codes and fuel types. Many thanks also for the latest Bio-Power newsletter. It makes good reading, not only from the interest point of view, but also because it is refreshing to get news of people actually doing something about lowering the impact of their lives, and helping others to lower theirs.

Do you read Permaculture magazine? There was an article in issue No. 36 (Summer 2003) called 'Stone Throwers and Alternative Builders' which I think you might find interesting. Keep up the good work!

John M

Whilst browsing the web I came across a grow and cure your own tobacco site at www.coffinails.com So you can grow your own tobacco and smoke it and pay NO DUTY! Plus, if you have an orchard you can grow apples to produce 7000 litres of cider duty free if you register http://www.hmce.gov.uk/forms/notices/162.htm#P134_6568 Now that is a lot of duty free drinking and smoking but if you produce one litre of fuel it is taxed. Maybe we should put in for a 10000 litre duty free limit if you make it yourself? What do you think?

Regards BRYAN

OUR LONG TERM SEMINAR PROGRAMME

Before getting too involved in setting up to make or sell fuel commercially we recommend people to come on one of our Introductory Seminars which are held every two or three weeks. These events normally take place over a weekend in North Wales. Most events start on a Friday evening, and then the seminar is run over the Saturday and Sunday morning, so people can leave after about 3.30 pm on Sunday. Some events are three days and include a visit to a Fact Factory where fuel is already being made.

The next Introductory Seminar will be held at the Victoria Hotel Llanberis, North Wales, and the dates are as follows...

Seminar 21	10, 11, 12	October (book now!)	Seminar 22	7, 8, 9	November
Makers convention / reunion	21, 22, 23	November	Seminar 23	5, 6, 7	December
Seminar 24	9, 10, 11	January 2004	Meeting to plan AGM	23, 24, 25	January 2004
Seminar 25	6, 7, 8	February 2004	Seminar 26	12, 13, 14	March 2004

This is your news medium – use it!

I do not write BPN for my own fun. Please send in material that you would like to be included. Don't worry if it is not written clearly. I can tidy it up if necessary. I do ask for pictures and a personal picture so people can get to know who is who in Bio-power. Please write a story about your own experience in setting up or testing our form of fuel, and stories of building plant or about your customer's response. Use this medium to share information that is not commercially sensitive with others who share our ideals and support us in reaching our aims.

If you are running a Bio-power working group or regional cell then please send me a copy of all minutes of meetings, and a current lists of participating members. If possible send me a copy of reports on achievements and events for publication.

Please use the information in this publication carefully.

Bio-power News is produced and distributed to the supporters and members of the Bio-power community only, to provide information about our work, news of events and activities. It is not for general release or for publication or disclosure to the press or the public in general. Please regard this publication as confidential to the Bio-power Community and its supporters. JN.

Members Questionnaire

To help us plan our first AGM event, a questionnaire has been added to this edition of BPN, so that we can better gauge the feeling of the membership. My feeling is that we could do very well to promote 'Bio-power' and gain respect of both the general public and officers and policy makers in our local authorities if we were to invite them to a large and well managed event at which there are professional speakers on the key issues that are fundamental to our stated aims. However, this is only something we can take on if there is support from the membership. Tell us what you think ... Your AGM, should it be a big or a small event?

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QUESTIONNAIRE To help shape the future of the network, please print this page, answer the questions and post it to: Bio-power, Tanrallt, Rhostryfan, Caernarfon, Gwynedd LL54 7NT

Your name :

Your address :

E-mail address : phone number :

Are you a supporter : y / n a paid up subscribing member : y / n

Do you already make MWVF? (tick one)

No I plan to try soon Yes – but so far only for my own use Yes –and I sell it commercially

Have you been on one of our seminars? (tick)

Not yet I plan to come soon yes, and I found it very helpful yes, and I found it moderately helpful
yes, but I found it disappointing Any comments

Are you already involved in any of our working groups? y / n Which ones?

We are planning our first gathering and AGM in the Spring or early Summer of 2004. Is this an event you wish to attend? (tick the best description of your situation)

Definitely not coming probably not coming sadly I can't manage at present maybe 'I'll come
I am definitely coming

Should our first AGM and gathering be a big or a small event? Would you prefer? (tick one or number preference)

A one day event a weekend event like the seminars a three day event including a public event on Friday

What aspect of the AGM / Gathering / Conference is most important to you? (tick one or number your preference)

to meet other members	to hear good speakers	to get more involved with the bio-power network
to attend the AGM	to attend workshops	to help promote our aims and objectives
to enjoy my self	to learn techniques	to get a better picture of what is going on

Do you have children under the age of 16 who would come with you? y / n

If yes please give ages and sex...(eg b 15, g 12, g 8)

Please tick the sort of activities you feel your children would most enjoy? Or number in preference 1 highest

Sailing	visit the Electric Mountain (technical)	walk in Snowdonia
swimming	visit the Slate Museum (Industrial heritage)	visit to castles
canoes	narrow gauge railway train	children's cooking
camping	art and creative crafts workshop	horse riding
barbeque	visit the Beacon climbing centre	climbing rocks
dancing	field sports(like football)	music workshop
treasure hunt	science and technology	exploring a forest

(please bear in mind that these activities involve either a cost or workers to arrange them!)

Are you able to offer any personal skills or support for children's activities? (put an 'S' in the right hand space above)

We are considering inviting officers from councils, the Environment Agency, Business Development, environmental NGO groups, funding organisations, and the public to attend on a special conference on bio-energy on the Friday.

Would you be prepared to help fund this through your own conference fee? y / n

Would you be prepared to personally host a delegate? - this means meet them at the conference centre, talk to them, guide them, pay (in advance) for their buffet lunch and maybe maintain contact with them afterwards. y / n

What sort of accommodation would you prefer? (tick one or number in preference)

A good hotel a cheap hotel B&B ... Camping Sleep in car I have local accommodation

What aspects of bio-power relate to you the most strongly? (tick one or number in order of preference):

The feeling of being part of an active network	just making your own fuel
it's an opportunity to change the world for the better	the benefit to the environment
it's a better way of working in business	it's a chance to make money

We are considering who to invite as conference speakers. (Indicate your order of preference and suggest any others)

The Environment Agency	Global Warming and Climate Change	Business practice
Working with money	Working with people and networking	The chemistry of our work
Power generation	Small scale generation and CHP	Taxation

Others:

Please suggest any speakers you would like us to consider (including yourself) :

Please use the rest of this form (and the reverse) for any ideas, comments or suggestions