



# SEEING THE LIGHT



National Energy Efficiency week has helped to highlight how all of us can save money on our fuel bills by reducing the amount of energy we use. At the A.T.C we have continued to distribute free low energy light bulbs to local residents thanks to the support of Calderdale Council's Home Energy Team and Npower.

Low Energy light bulbs produce light very efficiently, using approximately only 20% of the electricity of a traditional light bulb whilst also lasting up

to ten times longer. By using low energy light bulbs you could save up to £10 each year off your electricity bill.

To claim your free low energy light bulbs please call in and complete a short application form at the Green Shop, where you will also find a wealth of information on other energy saving ideas that can be used around the home.

Calderdale Council's Home Energy Team can be contacted on (01422) 392487.

## A to Z of recycling

Great Britain is currently generating a staggering 430 million tonnes of "waste" a year. Yes, 430 million tonnes!!! Worryingly there is currently a 3% increase in the volume of waste we are producing in our houses each year! At this rate we'll be doubling the amount of waste we create by the year 2020.

When something is thrown away we lose the natural resources, energy and time that had been used to make it in the first place. It's up to everyone to reduce the amount of waste they create and to recycle whenever possible. You know it makes sense!

### Q's

Q is for

**Quangos** – Easily recycled into money saving, accountable and democratically controlled organisations, or even a regionally elected assembly!

**Quantities of plastic 4-pack beer/baked bean can holders** – Donate all clean plastic can holders to Ekko, the ATC's very own plastics recycling factory.

**Questions** – Got a recycling query? Contact Calderdale's Recycling Officer (01422) 392385.

**Quiffs** – A useful source of nitrogen, damp

hair can be placed directly into your compost heaps in small quantities, or used dry as a slug-blocker around immature plants.

**Quilts** (1) – Excellent insulators for compost heaps and a superb packaging material for large fragile items. Contact Rhythm Bridge Foundation (01422 845074) if you have quilts suitable for protecting their drums and percussion instruments in transit.

**Quilts** (2) – Although traditionally born out of necessity, making warm bed coverings from discarded rags, patchworking and quilting remains a fashionable recognised art form and an excellent way of reducing the amount of textiles being wasted.

## WHAT ON EARTH IS...

### BIOMASS?

Biomass is anything that grows, such as trees and grasses and many food crops, due to the energy of the sun upon it. (Animal and human waste are also sometimes misleadingly referred to as Biomass.)

Energy is usually generated from Biomass by burning it and it is still the main source of fuel for the domestic energy needs of more than 50% of the world's population.

Large scale energy generation from biomass involves the use of crops such as trees and grasses, as well as forestry and industrial wood waste as fuel to provide heat and power. Willow is a commonly used biomass fuel although grasses such as miscanthus, which can only be grown successfully in temperate regions of the UK, will produce a bigger biomass harvest per acre than willow. Forestry waste is the residue from the clearing and "management" of woodland and forests. Industrial wood waste can be sourced from furniture manufacturers and carpenters. Wood pellets are also commercially produced from compressed sawdust, ground wood chips and wood shavings. The use of wood pellets for heating is well established in North America and much of Europe.

All biomass fuels will usually be dried, shredded and chipped before they are fed into a boiler and burnt. The heat from this combustion can be used to heat rooms and other spaces whilst gas is collected from the burning process and used to produce electricity. In Ely, Cambridgeshire, a state of the art straw burning power station currently produces 31MW of electricity. An increasing number of farms are using straw-fired boilers for on-site heating requirements in buildings and polytunnels.

The Government's Clear Skies initiative can provide grants for community household Biomass schemes. Contact [www.clearskies.org](http://www.clearskies.org). Local wood fuel suppliers can be sourced via the National Energy Foundation at [www.logpile.co.uk](http://www.logpile.co.uk).

## SUSTAINABLE TRANSPORT!

Whilst Britain's first passenger carrying solar powered boat was launched onto the Norfolk Broads for sight seeing trips around Barton Broad, Daniel Blackburn, a farmer from West Wales, was completing the final leg of his drive from Lands End to John o' Groats using a car that was fuelled exclusively by vegetable oil. Oils obtained from sunflowers, hemp, linseed and many other plants are suitable for use as a biodiesel and are also carbon neutral. This means that any carbon dioxide released during the oils combustion as fuel is reabsorbed from the atmosphere when the crop is grown again

As 12 assorted vehicles, including solar-powered rickshaws and motorbikes took place

in the inaugural International Solar Rally in India, demonstrating the huge potential of solar technology for transportation, American students from 20 university backed teams raced solar-powered cars 2,300 miles across the USA, from Chicago to Southern California, with the winner averaging an amazing 43 miles per hour!

Nearer to home, the New Vehicle Technology Fund, operated by the Energy Savings Trust, is supporting the deployment of three hydrogen fuel cell buses in London at the start of next year. Fuel cells function in similar ways to conventional batteries converting chemical energy into electricity efficiently and silently, but unlike batteries they do not have a

fixed amount of charge that runs down as they are used. Keep adding hydrogen and the fuel cells keep producing electricity but without the traditional exhaust fumes. The by-product of hydrogen fuel cells is small quantities of water!

Leeds based Going Green are currently offering a small 4 seater electric car, the G Wiz, for £4,500 plus VAT on a three year lease, which includes all servicing. The G Wiz is made in India and can travel up to 40 miles at 40mph before it needs recharging. It is not subject to road tax or the London congestion charge!

For more information contact [www.goinggreen.co.uk](http://www.goinggreen.co.uk)



*This month's nomination for Green Room 101 comes from Nicky Headon who argues that we should avoid SILK*

The production of just one gram of woven silk involves the death of at least 15 silk moths. And what a death...these moths are either boiled, steamed alive, dried in an oven, electrocuted or subjected to microwaves whilst in their cocoons that they have created to supposedly protect themselves from predators whilst they mature into butterflies or moths. The manufacture of a silk sari will

involve the death of approximately 50,000 silk moths. This is factory farming at its worst.

Unfortunately silk production has increased by almost 100% over the last 30 years. China and Japan are the world's main silk producers but India also still produces over 14,000 tonnes of silk a year...this mass destruction of butterfly lives cannot be justified. The most common species of silkworm used in silk production no longer exists in the wild.

During silk production some moths are allowed to mature in order to create new mating parents but in the process to obtain fine silk threads the wings of these moths are cut off during mating to prevent contact and contamination. Once these moths have laid their eggs they are also killed prematurely since they can only reproduce once in their lifetimes. (The process of identifying and isolating diseased moths consists of cutting off the moth's tail to examine it under a microscope.)

Silk oil and silk powder made from dead silk moths are used by the cosmetic industry in skin and hair moisturising and conditioning products including some hair mousses, face powders, eye shadows and even some soaps. Silk must be avoided in all of its guises. Fabrics from many plant fibres are able to produce alternatives to silk, and the fibres from pineapples produce a material that is as silky as anything that traditional silk can muster! The Oxford University Spinox project has also created a machine which mimics the way that spiders and silk worms spin their thread. By using a combination of artificial proteins and natural silk-like proteins, obtained from wheat or rice grains, a durable synthetic silk has been created.

Silk, your time is up! Room 101 awaits...

*To comment upon this nomination, read previous suggestions or submit your own Green Room 101 nomination visit [www.alternativetechnology.org.uk/101/](http://www.alternativetechnology.org.uk/101/)*

## BEYOND THE VALLEY

*Positive green news stories from outside the Calder Valley.*

### SMALL IS BEAUTIFUL

Six of Norway's biggest energy producers have formed a new company to specifically develop and operate small-scale hydro-power projects. Unlike most large hydro-power projects which involve constructing dams, flooding vast areas of land and potentially creating a supply of harmful methane gas, micro hydro-power schemes have relatively few adverse effects on the environment, are excellent ways to bring new income into rural areas where traditional industry and enterprises might be under threat, and can allow for an element of local control in energy production. Small hydro-power schemes are proving to be increasingly cost effective and many of those recently developed in Norway are already profitable.

### GM FREE BRITAIN?

The Lake District National Park Authority has declared itself a Genetically Modified (GM) free zone, joining the growing number of Councils who have banned the cultivation of genetically modified crops in their areas and decided to keep all of their services, including school meals, free of GM foods. Cornwall and South Gloucestershire Councils voted to go GM free earlier this year, whilst the whole of Wales, Lancashire, Devon and Dorset have taken steps to follow suit. The London Biodiversity Strategy, backed by Ken Livingstone, "opposes the commercial or experimental release of genetically modified organisms into the environment", whilst the National Trust has also banned it's 2,000 tenant farmers from growing genetically modified crops.

### WIND AHOY!

Wind turbines installed off the coast of Britain will undoubtedly make a vital contribution to our country's long-term secure energy supply, even according to the government! Seven projects, including those at Rhyll Flats in North Wales, Barrow in Cumbria, Kentish Flats, North Kent, and the Robin Rigg project in Solway Firth, have already received planning approval and will provide about 1.5% of Britain's total power demands. Two further projects off the Norfolk coast and at North Hoyle on the Welsh coast were approved in October last year. Construction work has recently begun at North Hoyle. Offshore wind farms are expected to generate 4% of Britain's energy production by 2010.

### THE TIDE HAS TURNED

The world's first permanent installation to generate electricity from the movement of offshore tides has been installed at Lynmouth in Devon. An underwater turbine is rotated gently (about once every three seconds so as not to endanger marine life) by the flows of the tide and has an output of 300kW. It should produce enough electricity for approximately 200 homes and will be fed directly into the National Grid. The relative reliability of tidal flows affords tidal power a potential advantage over other renewable energies and this project has been funded in part by the Department Of Trade and Industry and the European Commission's Energy Programme.