



ENERGY News

for the horticultural industry

Cornish grower switches to biomass heat thanks to a regional grant

A £3.3m funding scheme for biomass heating in South West England has paid out its first award to a Cornish grower and, as a result, Lanoyce Nurseries near Saltash has installed a new biomass woodchip boiler.

The company, which grows flowers for UK supermarkets including Sainsbury's, is using a 500kW boiler supplied by Wood Energy.

The boiler is set to use around 500 tonnes of wood each year, saving about 400 tonnes of carbon dioxide emissions when compared to a conventional energy system. Brian Rickard of Lanoyce Nurseries predicts that the boiler introduction will provide a significant reduction in cost for the company. Current projection shows this might be as much as £45,000 per year.

Lanoyce Nurseries specialises in growing Peruvian Lilies in 17,000 square metres of heated glasshouse.

The South West Bioheat Programme is to fund around 30 biomass heating projects with the £3.3m provided by Defra. The scheme is run by the South West Regional Development Agency and Regen SW with the aim of supporting projects that will deliver a new wave of renewable heat.

Stephen Green, Technology Programme Manager at Regen SW reports that the current round of funding has supported a number of bioheat projects adding 30 to 40MW of green heat to the South



Picture by Mark Passmore/apexnewspx.com. 05/12/2008.
Brian Rickard (Lanoyce Nurseries) (front), Mark Prior (RDA) (left) and Stephen Green (Technology Programme Manager- Regen SW) (right) switch on the South Wests first biomass boiler (Wood Chip Boiler) under the South West Bioheat Programme at Lanoyce Horticultural Nursery near Saltash, Cornwall

West capacity. Defra's funding is allowing some of the region's biggest heat users to make the switch from oil and gas to wood heating, utilising wood from sustainable South West supplies.

Chris Plackett, of FEC Services comments, "This type of regional initiative is just what the horticultural industry needs to develop

confidence and demonstrate the practical challenges of using alternative fuels."

Although the programme is now closed to new applications, interested companies are advised to contact the Biomass Energy Centre for more information on what support is available.

www.biomassenergycentre.org.uk

Energy price update

Energy markets are still volatile at the moment but the pessimistic outlook on the economy is helping to hold prices well below the peaks that were seen in the second half of 2008.

For the third time in the last four years, the New Year has started with Russia in dispute with one of its neighbours about gas supplies. Whilst UK energy markets have only shown a limited response to this political situation, brief rises in oil prices and cold weather combined to put upward pressure on gas prices in the early part of January. As a result, the day-ahead contract gas price reached 68.5p/therm; its highest level since November.

In the electricity market, base load wholesale prices are now back to the level of January 2008. Although some industry analysts are hoping for further falls, many specialists are now suggesting that the market has reached the lowest level that can be sustained in the current economic climate. This suggests now is a good time to look at securing next year's contracts as further significant falls become less likely.



£8m wood pellet factory to be built in Yorkshire

Future Energy Yorkshire, the renewable energy investment unit of development agency Yorkshire Forward, has announced that it is working with French-owned energy company Dalkia to build a new £8m wood pellet factory. The facility is to be developed in the Yorkshire and Humber region with the aim of making wood pellets available to up to 13,000 local homes.

The new factory could be completed by August 2009 and will be built, operated and maintained by Dalkia. The initial output will be 50,000 tonnes of wood pellets a year, but plans are in place to expand production to 150,000 tonnes as feedstock supplies increase.

As well as putting £5m into the wood pellet mill, Future Energy Yorkshire is also investing £1m into building the market for wood pellets over the next three years.

Richard Lee, programme director at Future Energy Yorkshire, described the project as an exciting development which will have huge benefits for Yorkshire and Humberside. He also expects the facility to provide a reliable and sustainable source of fuel supply for the region.

The £1m stimulus package will be used for job creation and to support wider initiatives that will grow the market for woodchips in

Yorkshire and Humberside. Future Energy Yorkshire believe that using wood pellets to generate energy is a low cost, clean and easy way to replace fossil fuel power, particularly for homes where mains gas is not currently available. The pellets will be produced from recovered clean wood that is dried and compressed to form an easily transportable, durable and reliable heat source with a high energy output.

Although wood pellets are a more expensive biomass fuel option than woodchip, they are claimed to be of better quality and require a smaller volume for storage. Pellets can easily be supplied in the small volumes needed for individual homes and businesses. Dalkia claim that the project should save around 65,000 tonnes of carbon dioxide emissions a year.

Stephen Brown, Senior Development Manager for energy and climate change at Yorkshire Forward believes that the mill is an important investment that can help bring down heating bills for communities, particularly during the current economically uncertain times. Yorkshire Forward also highlights that it will contribute to their climate change objectives as they work to reduce carbon emissions in the Yorkshire region.

Lords call for emissions trading revenues to be invested in 'green' technology

A House of Lords committee has called on the Government to use the money it raises from the EU Emissions Trading Scheme (EUETS) permit auction for investments in green technology.

The report by the House of Lords European committee focussed on the European Commission's proposed revisions to EUETS from 2013 onwards.

The Lords, who have previously supported a move towards 100% auctioning by 2013, said all the funds raised should be ploughed back into 'climate change-related measures'.

But the committee noted the Government has repeatedly rejected calls to use revenues for funding in this manner.

Free allocation of allowances could lead to windfall profits the report said, and for that reason it should be avoided wherever possible. Furthermore, in transitioning towards 100% auctioning for other sectors, the Lords agree any free allocation should be based on sector-specific EU-wide benchmarking that rewards the use of best available technology and stimulates further innovation.

All generators above 20MW are covered by the scheme. From 2013 generators have already been singled out for full auctioning, and the Government has endorsed this approach.

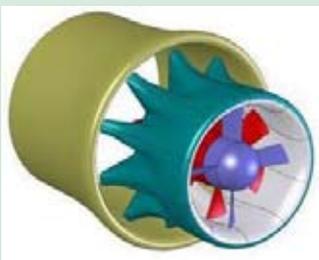
Biofuel trail starts at waste biomass power station

Residents in Staffordshire have started a year-long trial to investigate the viability of using recycled cooking oil for electricity generation.

Recycling centres will be sending deposited cooking oil to the Thetford biomass plant where it will be processed into biofuel and used for renewable electricity generation.

With a capacity of 38.5MW the equipment at the Thetford site is the largest biomass electricity generation facility in Europe.

Wind turbine uses jet engine technology



A newly invented wind turbine design which is based on jet engine technology has been launched and its backers claim that it could generate electricity at half the cost of conventional turbines.

A small-scale version of the turbine has been developed by FloDesign Wind Turbines and, after raising £4m of funding, the company will now start work on a 10kW prototype which it hopes to unveil in 2010.



Engineers call for household waste to generate power

Household rubbish should be used to produce green power rather than being sent for recycling, according to a new report by the Institution of Mechanical Engineers.

The report claimed converting waste could provide up to one fifth of the UK's electricity needs and help meet renewable energy targets.

In response environmentalists have said that recycling rubbish is still the better option in terms of tackling climate change.

IEA report highlights the potential of biofuels

The International Energy Agency (IEA) has recently published a report on R&D into biofuels. The report reviews the progress made in overcoming the technical and sustainability of biofuel production and makes recommendations about which fuels offer the best potential for the future.

The authors of the report recognised that first generation biofuels such as biodiesel are limited in their potential to provide a sustainable long term substitute to oil because of concerns over competition with food production.

However, second generation fuels, derived from bi-products or non-food sources such as straw, forest residues and short rotation coppice are thought to offer better options as they can give more sustainable long term fuel supplies.

The report also looked at the technical challenges and costs of these second generation biofuels and made recommendations about what future Government policies are needed to support their development.

Horticulture gets new CCL target for 2010

The Department for Energy and Climate Change (DECC)* and the NFU have agreed a new Climate Change Levy (CCL) target for the horticulture sector at the next scheme milestone in 2010.

The existing target of a 12% energy efficiency improvement was negotiated when horticultural businesses first became eligible for 80% CCL discount. Under the terms of the legal agreement with Government, DECC is entitled to propose new targets for all CCL qualifying sectors based on their previous performance.

Horticulture has been particularly successful in saving energy and meeting its CCL targets; with energy efficiency savings in excess of 18% achieved at the last milestone in 2006. With this in mind DECC suggested that the existing target was no longer realistic and that a new more stringent target should be set.

DECC's initial proposal was for the new 2010 target to be set at 28%. However, following detailed evidence submissions by the NFU, a more realistic figure has been negotiated.

"We have argued that many growers have made significant improvements in energy

efficiency that can't be repeated" comments NFU Horticultural Policy Advisor Chris Hartfield. *"For example, once a grower has invested in a technology like thermal screens it can't be done again"* he added.

DECC accepted these arguments and set the new target at a 20% improvement over base year. *"Bearing in mind current trading conditions being faced by many growers the new target is tough but realistic,"* said Chris Hartfield. *"Information from our CCL members suggests that further savings can still be made, so we're confident that growers will continue to rise to the challenge of saving energy and money".*

The outcome of the negotiations shows that growers are benefiting from the good relationship that has been built between the NFU and DECC, and that the reliable data provided by CCL scheme members means realistic targets have been set.

CCL scheme participants will be notified of their new target in early 2009.

*The new Department for Energy and Climate Change (DECC) took over the running of the CCL scheme from Defra when it was formed in November of 2008.



Thermal screens - essential for an energy efficient greenhouse?

It is now well proven that retractable thermal screens can save energy without having a detrimental effect on plant growth or quality; and you might even argue that a screen is now also an essential tool for both energy saving and greenhouse environment optimisation.

Recent HDC projects such as PC 197 at Mill Nurseries and PC 227 at Valley Grown Nurseries have shown the huge advantages of having a screen. So why in this time of high energy prices are some growers still overlooking the technology?

Obviously, if you are growing a low energy crop, or if your greenhouse does not lend itself to having a screen installed, then the payback on an installation may make it un-economic. However, because of the recent dramatic increases in energy prices, paybacks on most installations are now

between 18 months and three years.

For example, if you are growing a crop throughout the winter months at greenhouse temperatures of 18°C or more, you can expect to get savings of at least 90kWh/m². Based on current energy prices this translates to a saving in heating costs of around £30,000/Ha.

Obviously installation costs depend on the complexity of the site, but they are typically in the range of £50,000 to £90,000/Ha. This means that even with an old greenhouse with a difficult installation procedure the payback should still be no more than three years.

With this level of payback installing a thermal screen is still more attractive than facing the difficult task of managing the installation and operation of a greenhouse with a temporary polythene screen.



New Defra energy factsheets give energy saving advice

Six new factsheets are being written by energy and plant specialists at Warwick HRI using funding provided by Defra. These publications will give growers new information about how they can successfully implement energy saving techniques.

The first factsheet, scheduled to be published in February 2009, will provide details about how greenhouse temperature control methods can be used to save energy without compromising crop yield or quality. The information included is based on the results of research into techniques such as temperature integration and lower temperature set-points.

The other five factsheets that follow will cover the following topics: Energy management & good housekeeping; Humidity control; Thermal screens; Supplementary lighting; CO₂ enrichment.

The HDC is supporting the project by printing and distributing copies of the factsheets to members. Copies will also be available for download from the GrowSave website www.growsave.co.uk.

Government announces new support scheme for renewable heat

The Government has announced that it is set to introduce a new method of support for renewable heat technologies. Known as the Renewable Heat Incentive, the scheme was introduced to the House of Lords as part of the most recent reading of the new Energy Bill by Energy Minister Lord Hunt.

Statistics show that heat accounts for 49% of the UK's energy demand and is seen by many energy specialists as the area of energy use where large gains can be made in the Government's battle to combat climate change.

As yet, no announcements have been made about when the scheme will be introduced or how much support will be available. However, the information currently available has made it clear that any supplier of renewable heat or renewable fuel will qualify for help.

The technologies that will be covered by the new scheme will include:

- Biomass
- Biofuels
- Fuel cells
- Water including waves and tides
- Solar power
- Geothermal energy
- Air, water or ground source heat pumps
- Renewable fuel based combined heat and power systems.

Because renewable heat opportunities exist at all levels ranging from large scale industrial sites down to domestic households; all sizes of project will be eligible for the new scheme. This means that growers are likely to qualify for the payments which are expected to be based on a fixed rate of subsidy for each unit of renewable heat supplied.



DECC launches latest round of bioenergy grant

The Department of Energy and Climate Change (DECC) has announced that Round 5 of a scheme to fund combined heat and power (CHP) biomass projects is now open.

The scheme can provide a grant for up to 40% of the cost difference between installing biomass and conventionally fuelled equipment. Grants of up to £500,000 are on offer.

Applications for projects in England, including biomass-fuelled heating systems, CHP schemes, and anaerobic digesters, will be accepted until April 2009. The scheme is open to applicants from the industrial, commercial and community sectors.



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