



Cleantech en-vision

The quarterly newsletter of Cambridge Cleantech

April 2012

In this issue...

- 1 A green Budget?
- 2 What stakeholders thought of Budget 2012
Lack of public belief in government's "greenness"
- 3 **Members news**
Haverhill Research Park set to become cleantech centre
- 4 Government details further FiT changes; loses legal battle
- 5 Offshore wind co-ordination could save £3.5bn
UK must dig deep for marine and tidal
- 6 **Grant update**

Sector round-up...

-  **Policy**
-  **Low-carbon**
-  **Enterprise and finance**
-  **Renewables**
-  **Other topics**
-  **Environmental**

Better for business

The chancellor also pledged to simplify (or replace) the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, which requires larger energy users to report and reduce carbon emissions.

Osborne also provided a boost to electric vehicles by extending tax breaks for green fleets and reducing the carbon emissions threshold for eligibility.

Expectations for a "green" Budget were not high, and the chancellor did not exceed those expectations.

Government

A green Budget?

On 21 March chancellor George Osborne delivered the 2012-13 Budget to parliament.

Kicking-off Osborne said this would be a Budget that "unashamedly backs business". But he claimed it is a "fiscally neutral Budget that maintains the government's commitment to deficit reduction".

Boost for fossil fuels

Osborne may have said that he wants to see "investment in our world-leading energy sector, including renewables", but there was not much to back up those sentiments. "Renewable energy will play a crucial part in Britain's energy mix, but I will always be alert to the costs we are asking families and businesses to bear", he commented. Instead the main beneficiaries will be the oil and gas sectors, which get a £3bn package of measures to support further exploration of deposits in the North Sea.

CHP both winner and loser

Osborne also confirmed that the 2014-15 carbon price floor, which requires industries to pay a top-up on the price of carbon, will be set at a higher rate than previously indicated, equivalent to £9.55/tCO₂. This rise is reflective of erosion in the EU Emissions Trading Scheme carbon price, which reached a low of €6.58/t (£5.50/t) in January. But to increase support for combined heat and power (CHP) technologies, he confirmed that fuels used to generate heat in CHP plants will not be liable to pay the top-up carbon price support rates.

But the chancellor also ended CHP plants' exemption from the Climate Change Levy. The levy is a tax on the use of energy in industry, commerce and the public sector. A number of stakeholders have since warned that this decision will make the technology uneconomical for businesses.

**You can now join
Cambridge
Cleantech quickly
and easily through
our Sagepay
system directly
from our website.
Click [here](#) to join.**

What stakeholders thought of Budget 2012

Climate change minister **Greg Barker** signalled the Budget as clear evidence of the government's "unwavering commitment" to the renewables sector. He argued it should "lay to rest speculation that Osborne is luke warm towards the green economy". Barker was hopeful the chancellor's words would help secure the new investment, although he added that the government was "not complacent" and would continue to work with renewables companies to ensure there is an attractive environment for investors.

Labour party leader Ed Miliband said it was nothing more than "an unfair Budget from the same old Tories". "How can the priority for our country be an income tax cut for the richest 1%, at a time when the squeezed middle are facing rising petrol prices, higher energy bills, tax credits and child benefit being cut?", he asked.

MP and **Green Party** leader Caroline Lucas accused the chancellor of doing "nothing to help the green economy". "Cameron's promise to be the greenest government ever has been shown up for what it is—a sham", she added.

Director-general of business lobbyist the **CBI** John Cridland said "The government is wasting time by announcing yet another consultation on the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, rather than getting on with scrapping this complex and bureaucratic scheme." Cridland also raised concerns that the 33% rise in the carbon price floor will "hit UK energy-intensive businesses hard", and underlined the need for a more coherent strategy to unlock low-carbon industrial growth.

Lead CRC advisor at **KPMG** Ben Wielgus said the government proposals to reform or scrap the CRC "risk creating greater uncertainty amongst businesses, but in reality it is nothing new". "Simplification proposals are already expected imminently from DECC and the information we have seen indicates that significant savings can be achieved from a revised version of the CRC".

Combined Heat and Power Association director Graham Meeks said: "Across the country hundreds of businesses employing tens of thousands of workers are already facing the prospect of rising energy costs. For many, CHP is their only realistic prospect of addressing this threat and controlling their carbon emissions. Today the chancellor has taken this option off the table for the foreseeable future."

Chairman of the **Aldersgate Group** Peter Young accused the chancellor of "miss[ing an] opportunity to align the reforms to support growth with green policy".

Environmental charity **Greenpeace** said this was a "bad day for the environment". "Support for British manufacturing, green jobs and greening the economy should have been the cornerstone of Osborne's budget. Instead we got a polluters' charter", the group commented.

Lack of public belief in government's "greenness"

The **BBC** reported on 19 March that a recent poll commissioned by Greenpeace and the RSPB from YouGov has found the majority of the public are not convinced by the government's green claims. In 2010 prime minister David Cameron pledged to lead his party in the "greenest government ever", but the poll showed just 2% of the public believe this has been the case to date. Over 50% of respondents believe the government is about average on green issues, with only 10% saying it is greener than average.

Chief policy advisor for Greenpeace Ruth Davis said the poll showed ministers the public cannot "be duped by catchphrases or husky-hugging", but added "it is not too late for David Cameron to turn this around and leave an environmental legacy he can be proud of". She called for the prime minister to begin "by reining in his chancellor, who seems hell-bent on trashing the environment."

BBC

Haverhill Research Park set to become cleantech centre

Strength in numbers

About us

In November 2011 St Edmundsbury Borough Council approved the planning applications for the £100mn Haverhill Research Park, in Haverhill, Suffolk.

The park aims to bring together a wide spectrum of companies from start-ups to global players in areas such as clean and biotechnologies. Proposals being worked up include an Innovation Centre, grow on space and bespoke buildings together with a hotel, family pub, restaurant and crèche. Over 8 acres has been set-aside for 150 new homes, which will comprise a mix of first time buyer, family and executive housing, assuring the sustainability of this development.

Haverhill Research Park is development company Carisbrooke's latest venture. The company has a strong business and research park track-record in East Anglia where current and recent developments include Haverhill Business Park, The University of Essex Knowledge Gateway, Cambridge Research Park and Buckingham Business Park.



Why Haverhill?

Director of Carisbrooke Investments Nic Rumsey said:

"Haverhill has a strong history of manufacturing and there is evidence of best practice in this field.

Dialogue has already started with higher education institutions including University College Suffolk. Other high profile organisations recognising the potential of the project include Anglia Ruskin University, Babraham Institute, University of Cambridge Institute for Manufacturing, West Suffolk College, Menta and numerous private sector enterprises, including Genzyme, Vion and Accord Healthcare.

"We are keen to highlight best practice in the town and to demonstrate that Haverhill is a good place for cleantech businesses to be located," Rumsey commented.

Looking ahead

Construction of the infrastructure for the Haverhill Research Park is set to begin this July. The virtual animation on www.haverhillresearchpark.com demonstrates the high quality environment that will be created to support approximately 450,000 sq ft of office and laboratory space and supporting accommodation.

Infrastructure is due for completion by the end of 2012.

In related news...

A group of UK cleantech start-ups set off on an entrepreneurial trade mission to Silicon Valley, San Francisco in late March in a bid to break into the competitive US market and stimulate UK investment.

The latest Clean and Cool Mission saw 16 of the UK's top cleantech companies head to the US to take part in a week-long event to gain vital connections, insights and opportunities to help accelerate their business. Companies involved include a host of fuel cell and energy storage technology developers, such as Highview Power Storage, Moixa Technology, and RE Hydrogen, and renewable energy firms such as Oxford Photovoltaics and Naked Energy. The mission was organised by the Technology Strategy Board and The Long Run Venture, with support from UK Trade and Investment.

Companies that attended said they have been overwhelmed by the response, with many having had dozens of offers from investors and potential orders.

Clean and Cool Mission

For more information on any of these stories, please contact Cornwall Energy

The views expressed in this newsletter are not necessarily those of Cambridge Cleantech or Cornwall Energy

Government details further FiT changes; loses legal battle

Plans to reform the Feed-in Tariff (FiTs) Scheme have been met with a mixed reaction.

The FiT scheme aims to provide certainty for small-scale renewables generators by paying them a fixed rate for each unit of electricity produced from qualifying installations.

From 1 April the government wants to reduce rates available to bring down the overall cost of the scheme. Unveiling the proposals in early February climate change minister Greg Barker said the scheme had reached a “turning point”. The proposals will ensure that the scheme “deliver[s] for the many rather than the few”. “Our new plans will see almost two and a half times more installations than originally projected by 2015, which is good news for the sustainable growth of the industry”, he said.

To fulfil these aims two separate consultations were launched. The first concerned the FiT rate for solar photovoltaic (PV) projects; the second looked at non-solar technologies, including wind and biomass.

Proposed generation tariffs (p/kWh)

What could change?

Under the current proposals small-scale wind projects (<1.5kW) could see payments cut by more than 40%, from 35.9p/kWh to 21p/kWh. Cuts could also be imposed on larger windfarms (100kW-5MW).

The changes also propose a reduction in rates for hydro installations with less than 15kW capacity from 22p/kWh to 21p/kWh and larger hydro projects (2MW-5MW) could also see a cut from the current level of 4.9p/kWh to 4.5p/kWh.

No changes are proposed to rates for anaerobic digestion. But it is good news for micro-combined heat and power, which will see an increase in the subsidy available from 11.5p/kWh to 12.5p/kWh.

The rate for solar installations under 4kW is also facing a cut from 1 April to 21p/kWh, with a further reduction to between 16.5p/kWh and 13.6p/kWh in July, and to between 15.7p/kWh and 12.9p/kWh in October, depending on rates of installation.

Technology	Tariff band (kW)	Current tariffs	Proposed tariffs
AD	<250	14.7	14.7
	>250-<500	13.7	13.7
	>500-<5000	9.9	9
Hydro	<15	22	21
	>15-<100	19.7	19.7
	>100-<2000	12.1	12.1
	>2000-<5000	4.9	4.5
Micro-CHP	<2	11	12.5
Wind	<1.5	35.9	21
	>1.5-<15	28.1	21
	>15-<100	25.4	21
	>100-<500	20.7	17.5
	>500-<1500	10.4	9.5
	>1500-<5000	4.9	4.5
Solar	<4	21	13.6-16.5
	250-5000		4.7-7.1

A consultation on the changes for non-solar technologies will now be open until 26 April. The consultation on the changes to the solar PV FiT closes on 3 April.

Government appeal rejected

Meanwhile it was announced late March that the Supreme Court has rejected the government's appeal on a previous ruling deeming changes to the solar PV FiT "unlawful". As there is no further scope for appeal, this decision brings to an end the uncertainty about what rates developers that installed solar PV schemes since 12 December 2011 would receive; installations of up to 4kW will now receive the original 43p/kWh rate. But the judgement has caused speculation about whether or not the scheme will exceed its budget this year, and speculation has surfaced that the government is likely to cut the tariff again.

Government

Offshore wind co-ordination could save £3.5bn

Better co-ordination of links to new offshore wind farms could reduce connection costs by up to £3.5bn, according to a report from energy regulator Ofgem and the government's energy department.

The government's *Renewable Energy Road-map* indicates that 11GW-18GW of new offshore wind capacity could be constructed between now and 2020, compared to the current level of 1.6GW. This expansion will require major infrastructure development, but if new projects could be inter-linked instead of building an individual connect for each savings of 8%-15% on costs could be made.

The trend could reduce the cost of offshore wind to £100/MWh by 2020 and also pave the way for an offshore network linking UK windfarms in the North Sea with those of other European countries.

"There are a number of ways we can reduce the cost of offshore wind, and this is definitely one of the most exciting," says energy minister Charles Hendry. "Linking up power cables between offshore wind farms could make some serious savings, so we would be crazy not to encourage it", he commented.

Ofgem has also launched a consultation on how to change the regulatory regime for offshore transmission assets to encourage such a strategy. "Competitive tendering for the ownership of offshore power links is attracting new investment," says Robert Hull of Ofgem E-Serve. "We want to continue making savings, which is why co-ordinating links, where this can increase efficiency, is so important."

DECC

UK must dig deep for marine technologies

Trade association RenewableUK recently urged the government to bolster its financial backing of the wave and tidal power sector.

In the *Marine Energy in the UK: State of the Industry* report, published mid-March, the group called on the government and Scotland's devolved administration to step-up investment in wave and tidal power.

The UK has 7MW of wave and tidal energy installed and has a target to install 300MW. Scotland boasts 25% of Europe's tidal power and 10% of its wave power, with marine energy having the potential to provide 20% of the electricity consumed in the UK. But the report claimed ministers in Holyrood and Westminster had so far only provided £38mn for the sector—under a third of the £120mn needed immediately to help develop full-scale prototype devices.

The industry broadly predicted the sector could be worth £3.7bn to the UK by 2020 and create 10,000 jobs. But RenewableUK warned ministers that the UK risked losing this investment to competing countries if it failed to step-up current levels of support.

RenewableUK said some of this funding could be provided by the Green Investment Bank, but noted this facility does not currently have plans to provide funding for early-stage marine energy development. As such it called on the government to address the issue, arguing support for emerging technologies was particularly vital as every £1 of public cash could bring in up to £6 of private investment. The Scottish government has since opened a £100mn Renewable Energy Investment Fund to support fledgling renewables technologies.

The report also called on the government to help boost investor certainty in the sector by providing greater clarity on the level of subsidies marine energy projects will enjoy after 2017 when the current Renewable Obligation funding mechanism is due to end and to be replaced by long-term contracts.

RenewableUK

Grant update

The grant funding landscape is complex and ever-changing. The following is a snapshot of the opportunities that are most directly relevant to cleantech companies at this moment. There are also "general purpose" schemes that cleantech companies can use.

National schemes

Collaborative R&D on marine energy array technologies

Deadline for registrations 10 April

Through the Technology Strategy Board £10.5mn is available to support collaborative R&D (50%) that could lead to the successful deployment and operation of the first series of wave and tidal energy arrays. Projects must be collaborative and business-led.

Further information is available [here](#).

Feasibility studies on technology-inspired innovation

Deadline 11 April

Small and micro-companies can apply for 75% funding from the Technology Strategy Board for feasibility studies in a range of technology areas including control systems and power engineering aimed at reducing electricity consumption in the built environment or addressing electricity consumption in industrial processes or transport.

More information available [here](#).

R&D and feasibility projects in sustainable manufacturing

Deadline 25 April

The Technology Strategy Board has £5mn available to part-fund feasibility projects (75% funding) and collaborative R&D (50%) on innovation in manufacturing steps that improve economic performance, benefit the environment and have a positive social impact. This is a call for proposals with a limited window of opportunity; 25 April is the deadline for submission of full proposals for feasibility studies and for expressions of interest for collaborative R&D projects.

Further details are available [here](#).

EU schemes

Collaborative R&D in hydrogen fuel cells

Deadline 24 May

The European "Fuel Cells and Hydrogen Joint Undertaking" runs an annual call for proposals for collaborative projects in a number of areas relating to fuel cells and hydrogen. Projects must involve at least three organisations from three EU member states or associated countries.

See [here](#) for details.

If you wish to explore the options for grant funding for your business or need help with the preparation of grant funding applications, feel free to contact Alex Smeets of Cambridge Funding Solutions on 07718 520168 or alex@cambridgefundingsolutions.co.uk.

Green Deal gets £13.5mn funding boost for jobs and energy efficiency

Additional funding has been unveiled for the upcoming Green Deal. This is the government's flagship energy efficiency policy, set to be launched later this year. It aims to create 1,000 apprenticeships to help make homes and offices more energy efficient. The government's energy department will pump £3.5mn into the scheme to help train new personnel in the sector with a further £10mn to help increase energy efficiency in non-domestic buildings. The government claims the scheme will support 65,000 jobs by 2015.

Government

New rights on the horizon for community energy investment

Communities could be given the right to invest in new energy generation projects and to take over ownership of their local electricity grid supply under a bill introduced at Westminster. Tabled by a Labour MP, the *Energy Generation (Planning and Right to Invest) Bill* would require new energy generation companies to offer a proportion of shares for purchase by residents in local communities. This would give communities a say in how profits are allocated and how the businesses are run.

Parliament

Wales sets out low-carbon energy vision

First minister for Wales Carwyn Jones set out the country's vision for a low-carbon energy infrastructure on 14 March. The assembly government published its *Energy Wales: A Low-carbon Transition* that made a number of commitments including: improving the planning and consenting regime; working to improve energy infrastructure; maximising the value from the energy projects of greatest benefit such as energy efficiency; and providing support for businesses to enable them to compete for energy contracts. Jones said the "ambition is to create a low-carbon economy that delivers a wealthy future for Wales."

Welsh assembly government

Bristol biomass plant to benefit community

In mid-March the government granted planning consent for a new 150MW dedicated biomass power station at Royal Portbury Dock in the Port of Bristol, north Somerset. The consent allows E.ON Climate and Renewables to construct a plant which could provide enough electricity to power up to 160,000 homes. The plant will be fuelled mainly by imported virgin wood, dedicated energy crops and locally sourced waste wood. With permission now granted, construction could be complete by 2015 but the company has not yet set out a timetable for the project.

Government

Tidal stream prototype exceeds 200MWh milestone

A subsidiary of Rolls-Royce, Tidal Generation, has announced that its prototype tidal stream turbine currently operating off the Orkney Islands has exceeded a 200MWh milestone, it was reported on 13 March. The 500kW tidal turbine is currently being tested at the European Marine Energy Centre off the coast of Scotland as part of the government-backed Technology Strategy Board Deep-Gen III project.

Energy Efficiency News

Carbon Trust and GE join forces on £3mn technology fund

The Carbon Trust and GE recently announced a new pan-EU partnership to help accelerate cleantech growth. The move follows a decline in investment in the sector in Europe and concerns that the UK is seen as a "challenging" environment for innovation. As part of this 18-month phase of the partnership the group will provide £3mn for a business incubation fund targeted at new low-carbon technologies. The Carbon Trust will work with GE to identify early stage companies, then incubate and invest in those with the most potential.

Carbon Trust

Co-operative Group green energy lending reaches £700mn

The Co-operative Group lent £700mn to renewable energy projects in the last 12 months, according to figures from the organisation. Some £100mn went to small-scale community energy projects. The business also said that operational greenhouse gas emissions had reduced by a massive 35% on year-ago figures with water consumption down by 20%.

Co-operative

Ormonde offshore wind farm completed

Commissioning of Vattenfall's 150MW Ormonde offshore windfarm off the coast of Barrow-in-Furness, Cumbria, has been completed. The milestone brings an end to a two-year construction project, which has seen 30 5MW wind turbines installed 10km off the coast before being connected to the grid. The windfarm is now expected to provide enough electricity for about 100,000 homes each year.

Vattenfall

Aquamarine Power wins approval for first wave array

The Scottish government has approved the nation's first near-shore commercial wave power array, which will potentially power more than 1,000 homes. Two new Oyster wave energy converters will be added to an existing device at the European Marine Energy Centre in Orkney to allow Aquamarine Power to test the devices as an array. Each of the devices has a capacity of 800kW, bringing the total capacity of the array to 2.4MW.

Aquamarine Power

Fire-hit biomass plant could be closed until at least end of July

Parts of Tilbury power station in Essex could be closed until at least the end of July following a major fire at the biomass plant, according to site operator RWE npower. Two of the plant's three 250MW furnaces were damaged in the fire, although the third could be brought back on line as soon as April. Tilbury was originally built as a coal-fired power station in 1969 before being converted to burn biomass last year.

RWE Npower

UK outlines plan to tackle looming materials crunch

The government recently launched a plan to help businesses profit from recovering precious materials present in household goods. The *Resource Security Action Plan* called for improvements in design and the optimisation of reuse, recycling, and recovery of materials already circulating in the economy. In particular precious metals such as gold and platinum and rare earth elements including cobalt, nickel, palladium, beryllium, and gallium, which can be found in devices such as mobile phones and other electronics. It also outlined a number of measures to address the rising problem of material scarcity for British manufacturers.

Government

Renewables markets smash revenue records

The global market for solar photovoltaic (PV), wind energy, and biofuels grew 31% during 2011 to almost \$250bn (£160bn), according to new figures from analyst Clean Edge. The company's annual *Clean Energy Trends 2012* report revealed that combined global revenue for solar PV, wind power and biofuels defied the tough economic environment to grow from \$188bn in 2010 to \$246bn last year.

Clean Edge