



cornwallenergy

# Cleantech en-vision

The quarterly newsletter of Cambridge Cleantech

July 2012

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## Sector round-up...

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The *Offshore Wind Cost Reduction* report concluded that costs can be cut by a third. Yet The Crown Estate said this will only be achieved by dramatically increasing installed capacity or by the industry becoming much more competitive and efficient. It cautioned that, if the industry fails to improve its efficiency, capacity must be increased to achieve the same cost savings.

Government

Crown Estate

## Davey makes renewable energy pledge

**Energy and climate change secretary Ed Davey has declared the government's commitment to renewable energy is fixed.**

Speaking at the Global Offshore Wind Energy conference in London mid-June, Davey made clear the UK's renewables target is "not up for grabs".

He added the government's commitment "is not a fair-weather promise; an airy ambition, to be discarded or downgraded when the going gets tough. It is immovable. And our commitment to it is unshakeable".

Davey's speech followed the publication of two government-backed reports suggesting offshore wind could be commercially viable, without subsidy, before the end of the decade.

### Increase efficiency

In a bid to decarbonise the electricity sector, the government plans to install 18GW of offshore wind capacity around the UK by 2020 – compared with just 2GW today. But the costs of building windfarms offshore are still high at £149/MWh-£191/MWh, compared with gas, which costs nearer £80/MWh.

Last July the government set up an industry group to find ways of reducing the cost to build offshore wind farms to £100/MWh by 2020. In its first report, issued on 13 June, the group said such a reduction was possible.

The industry-led *Offshore Wind Cost Reduction Task Force Report* recommended that developers and equipment suppliers use "more efficient contracting" to cut the cost and risk of installing turbines. The group also called on the government to address bottlenecks and delays to the planning system and provide investors with the certainty they need to fund projects.

An offshore wind programme board headed by RenewableUK chair Andrew Jamieson will now be established implement the report's recommendations.

### Industry action needed

The report builds on detailed evidence presented in a parallel report published the same day by The Crown Estate.

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

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

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## Cambridge Cleantech celebrates reaching major milestone

### The cleantech community now tops 100 members

First it was the “fast 50” and now after just six months it is the “hot 100” of new companies that have chosen to join Cambridge Cleantech.



#### Enhancing competitiveness

Cambridge Cleantech has ambitious plans to further develop Cambridge as a leading cleantech centre and in so doing help promote the next wave of the Cambridge hi-tech cluster.

The organisation will achieve this through its mission of enhancing the area’s global competitiveness by co-ordinating, supporting and promoting commercial opportunities for members. With the worldwide reputation of Cambridge as a source of technology innovation, already home to some 500 earlier-stage innovators and more established environmental businesses, this area is a natural home for joined-up clustering and self-support.

#### Strong support

Chair Hugh Parnell said: “I have been working with cleantech companies for many years and felt that there was an increasing need to support businesses in the burgeoning sector and thereby help develop the third wave, following on from the ICT and life science waves, of the Cambridge hi-tech cluster. The response from business has clearly demonstrated the appetite for the initiative and that the timing is right.”

Chief executive Martin Garratt added that the organisation was “delighted to have secured the support of so many companies and feel that we now have real momentum to help develop the sector to the benefit of the local economy”.

He attributed the success to a combination of events covering key topics, such as smart metering, low-carbon vehicles and building technologies, a new EU funded business coaching programme for cleantech start-ups and a new government regulatory alerts system for the sector. “These have all caught the imagination of companies looking to expand in this vibrant part of the economy,” he said.

“The cleantech sector is one of the few expanding parts of the national economy and the Cambridge area, with its internationally acclaimed academic base, reputation for innovation and entrepreneurs with an interest in expanding markets, is ideally placed to make the most of the opportunity. Cambridge Cleantech will support the sector as it grows and seek to help link companies to new opportunities.”

Please visit the [website](#) for more information or call 01223 750017.



Cambridge Cleantech chairman Hugh Parnell

## Clegg launches government innovation competition to find a UK “greenius”

The government has launched a new competition to find the UK’s next “green genius” – or “greenius”. The £3mn competition, launched by deputy prime minister Nick Clegg, invites entrepreneurs and businesses to submit solutions to green issues such as clean, reliable energy, and food and water security.

Launching the competition, Clegg said: “When it comes to green innovation, Britain is a world leader. The green sector is worth 8% of UK GDP – the largest proportion of any of the leading industrial G20 nations, and employs almost 940,000 people – up 2.8 percentage points from last year. Sales in the green economy are also growing at a rate of 4.7%.”

#### Government

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## Need-to-know renewables information just a click away

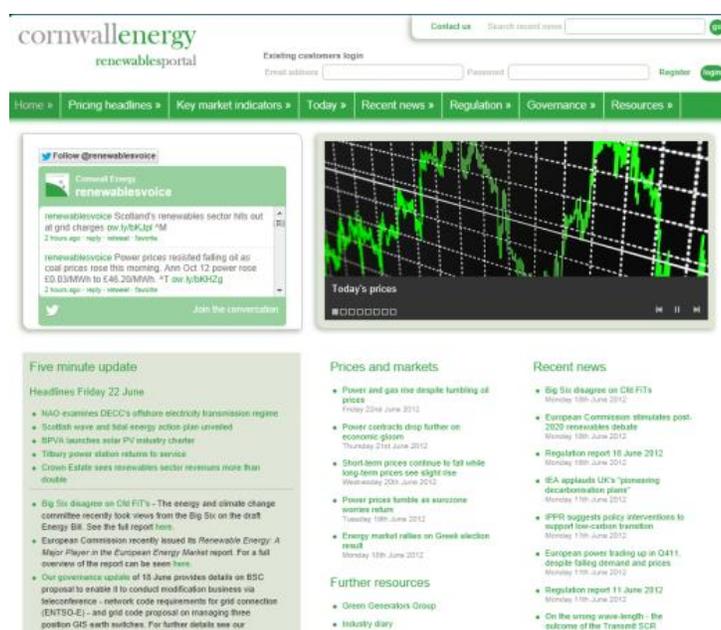
Get the latest market developments with a brand new online resource

Keep on top of the latest developments in the renewables sector with Cornwall Energy's new online *Renewables Portal*. It pulls together need-to-know information and explains the complex issues facing the sector in plain English.



Get the best deal for your company

If you're currently a participant in the renewables market, or even a potential participant, you need to keep on top of a wide range of market developments, policy statements and regulatory decisions to ensure you get the best deal for your company. The *Renewables Portal* gives you the best chance of doing this.



As a subscriber, you will receive daily updates on wholesale electricity prices, and E-Roc and E-Power auctions results. This data is supplemented with briefings on challenges facing renewables developers and the wider energy sector, plus background information on important policy and regulatory developments.

Exclusive free-trial offer

For a limited time, we're offering Cambridge Cleantech members the chance to use the portal with a free trial. To discuss this, contact Ben Hall on 01603 283651 or [ben@cornwallenergy.com](mailto:ben@cornwallenergy.com).

About Cornwall Energy

Cornwall Energy is a dynamic energy markets consultant providing informed, independent energy market analysis and advice for market participants, service providers and policy-makers. We ensure companies are kept up-to-date with

advances in fast-moving energy markets and interpret what these developments may mean for them in practice.

Wide range of training courses

Cornwall Energy runs in-house and public courses on the renewables, gas and electricity markets. Our Energy Institute accredited *Renewables Obligation and Beyond* public course takes place on 12 July and again on 8 November. For more details please contact Georgie on [georgie@cornwallenergy.com](mailto:georgie@cornwallenergy.com).

## UK and Ireland go green with development of renewable energy trading relationship

The UK and Irish governments have agreed a process to develop a formal Memorandum of Understanding on renewable energy trading between the two countries.

Officials from both sides will examine a range of technical, regulatory and market issues necessary to underpin the development of cross-jurisdictional renewables trades, with the aim of finalising by the end of the year.

Government

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## Draft legislation aims to boost low-carbon electricity

**The government has set out plans for the biggest reforms to the energy market for two decades.**

Introducing the draft *Energy Bill* to parliament at the end of May, Ed Davey, energy and climate change secretary, said it was “a game-changing and a world leading agenda”. He added that the Bill would ensure the UK has a balanced portfolio of renewables, new nuclear and carbon capture and storage. Yet he stated gas will continue to play an important role in the transition to a low-carbon economy.

The aim of the Bill – which encompasses the government’s Electricity Market Reform (EMR) proposals – is to stimulate over £100bn of investment in new low-carbon electricity generation.

At the heart of the reform is the introduction of contracts for difference feed-in tariffs (CfD FiTs). These contracts are a type of power purchasing agreement between a generator and a buyer that guarantees a fixed (strike) price over a period of time. This will give companies investing in low-carbon energy guaranteed returns for their initial outlay.

To ensure there is sufficient reliable capacity to meet demand on days of low wind, the government is looking to create a capacity market. This favours the construction of new flexible gas-fired power stations. The government is also to impose an emissions performance standard of 450g/kWh to effectively ban the construction of any new coal-fired power plants without carbon capture and storage capability. It has already passed a new law to introduce carbon price support from April 2013.

The draft Bill is currently undergoing pre-legislative scrutiny from the energy and climate change select committee before it is formally published in the autumn.

For more information on the draft *Energy Bill* check out Cornwall Energy’s recent summary [here](#).

### Government

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## Cameron seeks energy security through diversity

**Prime minister David Cameron has urged other nations to take a leaf from Britain’s book and develop their renewable energy generation strategies as soon as possible.**

Cameron, giving his first green speech since taking office in 2010, said that, with the rising global demand for energy, countries “urgently need a more diverse, cleaner mix of energy sources that will deliver energy security without causing irreparable damage to the planet”.

Speaking at the third annual Clean Energy Ministerial in April, he claimed Britain had “played a leading role at the forefront of this green energy revolution”. He added: “Our commitment and investment has helped to make renewable energy possible [...] the challenge now is to make it financially sustainable.”

The Ministerial also saw the announcement of a number of policy initiatives. These included the establishment of a £35mn Energy Entrepreneurs Fund to support small- to medium-sized businesses develop and demonstrate low-carbon technologies. An initial £20mn will be given to support energy efficiency technologies, with the remaining £15mn targeted on new generation technologies at a later date.

The government also unveiled its vision to boost the take-up of biomass for energy usage in its new *Bioenergy Strategy*, while additional funding was also unveiled for heat storage technologies and energy-from-waste projects. The event was wrapped-up with a number of differing agreements designed to help improve appliance efficiency.

The summit brought ministers from 22 countries together in a bid to find solutions to global energy policy by uniting decision-makers responsible for 90% of global investment in the sector.

### Government—Cameron

### Energy Entrepreneurs Fund

### Bioenergy Strategy

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## Grant and funding update

The grant funding landscape is complex and ever-changing. The following is a snapshot of the opportunities that directly relate to cleantech companies. There are also “general purpose” schemes cleantech companies can use.



### **SBRI competition for Innovative Environmental Sensors**

Deadline: 11 July 2012.

This Environment Agency competition for fully-funded contracts is for innovative solutions for measuring nutrients in freshwater directly in the field rather than in the laboratory. The main aims are to: deliver a flexible and future-proofed platform to support sensor requirements (power, communications etc.); innovative sensor solutions to increase the range of data that can be collected in the field; alternatives to existing processes and use of field/ lab instrumentation; and reductions in time, cost, travel and facilities required for data collection.

More information is available [here](#).

### **SBRI competition for Advanced Heat Storage solutions**

Registration deadline: 3 August 2012.

This is a government (DECC) competition for fully-funded contracts for feasibility studies and demonstration projects to assess the viability of compact heat storage materials and mechanisms as an effective means to mitigate strain on the electricity grid.

More details can be found [here](#).

### **Developing the Civil Nuclear Power Supply Chain**

Registration deadline: 29 August 2012.

Up to £15mn will be made available for: collaborative feasibility projects; collaborative research and development projects; and Knowledge Transfer Partnerships to stimulate innovation in the civil nuclear power sector and to strengthen the UK supply chain.

A briefing event will be held on 10 July.

More information is available [here](#).

### **SBRI competition for Energy Efficiency and Optimisation for Defence**

Deadline: 28 August 2012.

The Ministry of Defence wishes to significantly reduce its equipment fossil fuel consumption while maintaining the ability to deliver operational effect, and is looking for proposals to: understand and demonstrate how and where existing military equipment can be operated more efficiently while still being able to deliver the required operational effect, or understand where the limitations of optimisation occur; and low-cost, proof-of-concept technologies that will provide credible evidence of the performance and possible utility in military systems. These technologies should be capable of easy integration with existing military systems to improve energy efficiency and reduce consumption of fossil fuels.

A seminar will be held on 11 July.

More details can be found [here](#).

***If you wish to explore the options for grant funding for your business or need help with the preparation of grant funding applications, please contact Alex Smeets of Cambridge Funding Solutions on 07718 520168 or [alex@cambridgefundingsolutions.co.uk](mailto:alex@cambridgefundingsolutions.co.uk).***

## Mandatory carbon reporting gets business backing

The government has unveiled plans to force large companies to report annually on their carbon emissions.

The plans will make Britain the first country in the world to make it compulsory for listed companies to include emissions data in their annual reports.



The new rules were unveiled to coincide with the opening of the Rio+20 sustainability conference on 20 June by deputy prime minister Nick Clegg. Under the plans companies listed on the London Stock Exchange will have to annually publish full details of their greenhouse gas emissions. The proposals will affect over 1,500 listed companies, which will have to report their emissions from April next year.

The regulations will be reviewed in 2015 when ministers will decide whether to extend the measures to privately owned companies.

Government

## Government caps renewable heat pay-outs

Plans have been set out to ensure the government's support mechanism for renewable heat stays within budget.

The Renewable Heat Incentive (RHI) was launched in 2011 as a mean to encourage the production of renewable heat, using technologies such as heat pumps. The scheme pays non-domestic premises for heat produced over a period of 20 years. To ensure there is enough funding down the line to guarantee payments to eligible heat producers the government has set a pay-out limit of £70mn for the 2012–13 financial year.

To provide clarity for investors a trigger point of near £68mn will be implemented. Once reached this would give one week's notice of the close of the scheme.

Government

## Wrap launches resource sustainability forum

A "ground-breaking" forum to tackle the environmental footprint of everyday products was launched mid-June.

The Product Sustainability Forum set up under the auspices of pressure group WRAP aims to take the lead on addressing environmental and sustainability issues that arise from the making and selling of products. Energy consumption, greenhouse gas emissions, water use, reliance on raw materials, product-related waste and packaging will all come under the spotlight. It brings together over 80 organisations including retailers, charities, academics and governmental departments.

WRAP

## UK's decarbonisation plans gets plaudits

In late May the International Energy Agency (IEA) published its 2012 review of UK energy policies.

The *Energy Policies of IEA Countries—United Kingdom 2012 Review* applauded the UK's long-term vision to reduce 80% of greenhouse gas emissions by 2050 through substantial boosts to energy efficiency alongside a "pioneering" Electricity Market Reform.

The IEA highlighted its belief in the UK plans, claiming that the nation "consistently plays a constructive role in international climate policy", adding that domestic policies "enhance its credibility on the world stage". But the report warned such an ambitious unilateral climate policy will only remain politically sustainable should other countries' plans be equally aggressive.

IEA

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### Government cuts solar PV subsidy (again)

Late May the government responded to its recent consultation on the future of solar photovoltaic feed-in tariffs (FiTs). The response confirmed a number of changes to the current scheme that will impact all solar PV installations with an eligibility date on or after the 1 August 2012. Climate change minister Greg Barker said the new regulations were aimed at putting the scheme on a more “predictable, certain, and sustainable footing”. Most notably the government has confirmed a reduction to the generation tariff for new installations. This represents a further reduction in the sub-4kW rate from 21p/kWh to 16p/kWh. In addition a degeneration mechanism to reduce generation tariffs on a three-monthly basis has been unveiled.

Government

### Green policies mitigate fossil fuel energy price spikes

A government-commissioned report has concluded the UK’s energy and climate change policies can help shield the economy from oil and gas price shocks. The report, issued in late May and written by Oxford Economics, noted the negative impact of energy price spikes on economic growth could be halved if the UK’s climate policies act to reduce the country’s demand for coal, gas and oil.

Government

### Polls show public support for renewables

A recent poll, published by green charity Friends of the Earth (FoE), revealed that 85% of the British public would like to see the government increasing the use of clean energy and reducing the use of overseas gas. The YouGov poll, which was released to mark the launch of the environment charity’s Clean British Energy campaign, showed that nine out of 10 people want the government to back Britain by developing renewable energy from UK wind, solar, wave and tidal power. 64% of UK adults (88% in Scotland) felt that renewables should provide the bulk of new generation capacity installed between now and 2020. A recent Ipsos-Mori poll also turned up a similarly sized majority in favour of wind power.

FoE

### Biomass power station plan for Norfolk backed

Plans for a biomass power station in Norfolk, which it is claimed could bring up to £9mn a year to the East Anglian economy, have been approved. Breckland Council backed the Icen Energy scheme for the straw-powered plant to be built at Snetterton. The company said the power station could provide enough energy for up to 68,000 homes

Icen Energy

### Smart network upgrades could save £19bn

Industry group SmartGrid GB published a report late April that found smart grid technology will cost £27bn to develop and deploy. But sticking to conventional technology to upgrade the UK’s ageing infrastructure between now and 2050 will cost £19bn more. The *Smart Grid: A Race Worth Winning?* Report looked at the core benefits that will be realised from investing in a more efficient network. The report warned there is a decreasing time window for the UK to be a world leader in the technology as a result of competition from abroad. Failure to deploy a smart grid will push up energy costs and could mean the UK misses its carbon reduction targets.

SmartGrid GB

### UK should seize geothermal opportunity

The equivalent to nearly nine nuclear power stations could be harnessed from below the Earth’s surface and used to power homes and industry, according to report by engineering consultants Sinclair Knight Merz (SKM). The *Geothermal potential in Great Britain and Northern Ireland* report, issued late May claimed that some 9.5GW of power could be harnessed from “hotspots” of geothermal energy in Cheshire, Cornwall, Dorset, East Yorkshire, Hampshire, the Lake District, Lincolnshire, Northern Ireland, Scotland and Worcester.

SKM

### Renewables set to defy economic downturn

In early May consultant KPMG claimed private equity and infrastructure funds are preparing to kick-start an increase in deal activity in the renewable energy sector over the next 18 months. The company's *Green Power: 2012* survey found that 92% of respondents expected infrastructure funds and private equity investors to be the most active in buying and investing in renewables (up 64% from 2011), followed by independent power producers (up 61% from last year). 85% of respondents expect renewable energy deal flow to remain robust in the next five years, with 70% claiming that hydro, onshore wind and solar photovoltaic investments are "safe havens" for long-term funding.

[KPMG](#)

### Government and businesses launch new low-carbon procurement initiative

UK companies will work with the government as part of a new initiative to emphasise the need for low-carbon procurement in renewable energy and green transport. The government's business department is leading the initiative with the Prince of Wales Corporate Leaders Group on Climate Change, alongside a number of companies such as BT and Sky. The initiative offers low-carbon suppliers the opportunity to fill over £1bn worth of contracts. Business secretary Vince Cable said the government has a "key role" in signalling demand for low-carbon innovation.

[Energy Efficiency News](#)

### Government defends marine energy strategy

On 17 May the government issued its response to the energy and climate change select committee's February report on the future of marine renewables. The government said that exploiting a range of low-carbon technologies was critical to meeting the 2050 emissions reduction target and said it is mindful of the need to assimilate marine energy's position within the spectrum of renewables sources. Sectors such as offshore wind had already proved themselves likely to generate greater environmental and growth benefits for the UK, and investment in low-carbon technologies needed to remain proportionate to their potential benefits. But the government also reaffirmed that marine energy would not be an immediate priority for the Green Investment Bank.

[Parliament](#)

### World's largest windfarm opens for business

Developers SSE, DONG Energy and investment group OPW announced mid-June that the £1bn Walney offshore windfarm is now fully operational. At a total capacity of over 367MW, the Walney development off the Cumbrian coast is currently the world's largest operational offshore windfarm. Work was also recently completed on another of SSE's wind farms, Gordonbush near Brora in Sutherland in the Scottish Highlands.

[SSE—Walney](#)    [SSE—Gordonbush](#)

### Low-carbon transport projects given local boost

Transport minister Norman Baker unveiled on 24 May a £113mn injection of funds from the government's Local Sustainable Transport Fund to support 30 local low-carbon transport schemes. The successful schemes include public transport hubs and the development of new cycling infrastructure, which will be led by 29 local authorities in England.

[Government](#)

### Defra targets food waste

Waste prevention will be a key focus for the government over the next 12 months. Speaking at the Chartered institution of Waste Management (CIWM)'s annual conference in June, Defra recycling minister Lord Taylor that the government is looking to focus its efforts further up the waste hierarchy.

Taylor confirmed his department will be looking at ways to encourage the waste sector to work more closely with organisations, businesses and local communities to implement stronger minimisation measures. Food waste, in particular, will be a key target area.

[CIWM](#)