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Climate Change and Energy update

Climate Change and Energy newsletter
May 2009

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NUCLEAR UPDATE

The Department of Energy and Climate Change (DECC) always intended 2009 to be a year when policy gave way to practical developments in the nuclear industry. Recent activity in the nuclear industry has certainly seemed to indicate that pure aims and goals are giving way to real progress.

EDF sells 20% stake in British energy to Centrica

On 11 May, EDF sold a 20% stake in its recently acquired nuclear operator British Energy to Centrica, the UK gas group, for £2.3bn. The deal represented a smaller stake than originally intended due to Centrica shareholders' concern that it could be overpaying. The deal effectively valued British Energy at almost 6% less than the £12.5bn EDF paid in December 2008.



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The deal marks Centrica's entry into the nuclear market as it seeks to reduce its exposure to fluctuating prices in the wholesale energy markets. The deal was financed by the transfer to EDF of Centrica's 51% interest in Belgian firm SPE (valued at £1.2bn) with the remainder paid in cash.

Neil Woodford, head of investment at Invesco Perpetual, said the move was a major step forward for Centrica and stated:

'The partnership with EDF also promises to be a driving force in revitalising the UK nuclear industry; a vital project if the UK is to meet its long-term climate change obligations and energy security needs.'

Centrica and EDF intend to build four new nuclear plants on existing sites as part of Government plans for nuclear expansion. EDF has also invited bidders to express a formal interest in purchasing land near either of its Dungeness or Heysham nuclear station. EDF is looking for 'credible' and experienced nuclear operators to purchase one of the sites with a view to new nuclear plants being built there.

Auction of nuclear sites raises £387m

On 29 April, the Nuclear Decommissioning Authority (NDA) announced the successful sale of land adjacent to three existing nuclear sites at Bradwell in Wessex, Oldbury in Gloucestershire and Wylfa in Anglesey. The Government hopes these sales will form an integral role in encouraging the private sector to build a new generation of nuclear power stations as well as helping to fund the decommissioning of former nuclear sites.

A consortium of E.ON and RWE Npower has won the opportunity to construct a new plant on 438 acres of land at Wylfa in Anglesey and another on 119 acres at Oldbury in Gloucestershire. The EDF group won the auction of land at Bradwell. However, it has already announced plans to sell this on to concentrate on other projects.

Richard Waite, the acting chief executive of the NDA, welcomed the online auction which raised more than many had predicted:

'The sale of these three sites is worth up to £387m which the NDA will use to help fund the cost of decommissioning and further its core mission.'

Scotland's largest ever nuclear waste site approved

A store and treatment plant costing more than £300m has been given the go ahead to be built on land next to the Dounreay nuclear power complex in Caithness. Work is due to start next year on the treatment plant with construction of the store set to begin in 2011.

Solid and liquid intermediate-level radioactive waste will be processed in brand new D3900 treatment plants, where it will be mixed with cement and set inside drums and crates. The site is set to be ready to receive waste in 2014.



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Tony Trayner, head of construction at Dounreay Site Restoration Limited, said the facilities were crucial to the clean-up of Dounreay. He stated:

'An essential element of any decommissioning project is being able to deal with the radioactive waste that it generates and these new facilities will give us that capacity through to the end of our programme.'

Nuclear power station operator fined

On 6 February, Magnox Electric Limited (now known as Magnox North Limited and Magnox South Limited) were found guilty of three offences for disposing of radioactive waste otherwise than in accordance with an authorisation under the Radioactive Substances Act 1993. They were fined £250,000 and ordered to pay costs of £150,000.

Between March 1990 and February 2004, small amounts of liquid radioactive waste leaked from a slump within the decontamination bay at the site. Although Magnox reported the leak to the Environment Agency as soon as they discovered it and there was no risk to the public and only minimal environmental damage, Magnox was found guilty of failing to maintain the slump and failing to carry out routine inspections.

OFGEM CONSULTATION ON CONSUMER CHOICE

On 15 April, Ofgem published a consultation document on how to improve competition in the energy supply market. Although specifically aimed at domestic consumers, this package of remedies aims to provide additional help to small businesses by providing both with greater competition, choice and consumer engagement.

One of the key recommendations of the paper was the introduction of a set of overarching standards of conduct for suppliers. Although these standards were not considered suitable to be implemented via directly-enforceable licence conditions, they are hoped to have significant impact on suppliers' behaviour. Ofgem does note, however, that it will review this situation at a future date when their impact can be assessed.

Suppliers will be expected to take all reasonable steps to adhere in their dealings with domestic and small business consumers, to the following standards:

- they must not sell a customer a product or service that he or she does not fully understand or that is inappropriate for their needs and circumstances;
- they must not change anything about a customer's product or service without clearly explaining to him or her why;
- they must not prevent a customer from switching product or supplier without good reason;
- they must not offer products that are unnecessarily complex or confusing; and
- they must make it easy for customers to contact them and act promptly and courteously to 'put things right' when errors are made.

These standards are designed to be backed up by more specific measures which Ofgem hope will strengthen consumer choice.



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Measures promoting more effective consumer engagement

Ofgem research found that just over half of domestic consumers who switch energy supplier do so only in response to a salesperson. In addition to this, only about a third of those who switch actually achieve a price reduction (and this is reduced by half again when considering those who have switched in response to direct sales). Not only were people unwilling to switch providers, they were even less willing (only 8%) to switch tariff within a provider even though this could save them money. A recent moneysupermarket.com report has found that this consumer loyalty is meaning that consumers across the UK are missing out on up to £2.5bn by not switching their energy tariff to the most preferable one in their region.

Consequently, Ofgem is proposing that more information should be provided to consumers in a clear and easily comparable manner. Switching should be encouraged (whether it be to a different tariff or supplier) where it is clearly in the interests of the consumer. The 'Big 6' electricity suppliers are also being encouraged to introduce switching guarantees whereby they promise to support consumers through a switch.

Further proposals from Ofgem include:

- increasing confidence in price comparison and switching websites; and
- making it easier for people to switch even when they owe money to previous suppliers by making it easier to identify where this is due to supplier mistake and also by increasing the debt threshold to £200.

Measures to help consumers make well-informed choices

Ofgem proposes to strengthen the licence requirements in relation to suppliers' sales marketing by obliging suppliers to:

- provide the consumer with a written, clear and easy to understand quotation prior to any direct sale, with a record left for the customer.
- provide consumers, prior to a sale, with a written comparison between their offer and the consumer's current deal.
- provide consumers with certain key information at the point of sale. This should include: an explanation of the switching process; a reminder to check the appropriateness of the product; a reminder of the cooling-off period; and details of what a consumer should do if they have any concerns.

The need for this has been underlined by a recent Which? report which noted that 7 out of 10 people found the number of gas and electricity tariffs available confusing. Consumers were reported to find bills 'baffling' and limited their ability to choose between the vast array of options available.



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Measures to help small business consumers

Ofgem intends to introduce increased regulatory protection for non-domestic customers who are currently viewed as unable to engage effectively with the energy markets. Proposals include the following:

- suppliers should be required to provide customers with clear and understandable information regarding the terms and conditions of their contracts at the appropriate time. Suppliers should also: provide advance notice of the expiry of a fixed term contract; state what rights and responsibilities consumers have at expiry; notify customers of any objections to transfer and communicate the new terms following expiry of a fixed term.
- consumers should be free to switch at the end of any fixed term contract and suppliers should not be able to automatically roll over the contracts.
- third party intermediaries should work with the Office of Fair Trading to develop a new code of practice for this area. Ofgem should have no regulatory control over this.

Measures to promote market transparency

Ofgem propose to make it easier for current and potential market participants to assess the profitability of different areas of the market. Consequently, they have considered a number of options for enabling information on the 'Big 6' to be separated into distinct financial details of their gas supply, electricity supply and electricity generation businesses. Ofgem is seeking views on exactly how this should be implemented.

In addition, Ofgem is also proposing measures to enhance market monitoring.

Where next?

Ofgem has invited comments on this consultation by 29 May 2009 with a view to agreeing reforms with suppliers in June 2009. If agreement can be reached, then Ofgem will issue statutory consultations on a range of licence modifications by the end of July 2009 with a view to implementation in Autumn 2009. If agreement cannot be reached, Ofgem has stated it will consider making a market information reference to the Competition Commission.

SMART METERING

Warmly welcomed by the smart green technology industry, the Government has unveiled plans for every home in Britain to be equipped with smart meters by the end of 2020, bringing an end to estimated billing from domestic energy suppliers.

In the biggest revolution in energy use since the 1970s when British Gas converted all the nation's homes to natural gas, over 26 million electricity and 22 million gas meters will need to be fitted at a cost of £7bn. The scheme will allow suppliers to remotely record customers' gas and electricity use and allows customers to monitor their own energy use.

It is hoped that the scheme will reduce the UK's energy use, cut carbon emissions and save customers money.



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What is smart metering?

"Smart meters" is a catch-all phrase used to describe a new generation of devices with an extra layer of functionality than the existing "dumb" devices. Whilst the latter are only capable of measuring gross gas and electricity consumption in a home, smart meters can:

- be read remotely;
- display energy consumption in monetary terms; and
- allow customers to monitor over the internet where in their house energy is being consumed, and particularly where it is being wasted.

It is hoped that smart metering will encourage customers to reduce energy use, bringing both financial and environmental benefits. Nationally, it is predicted that smart metering will cut £100m from consumer bills by 2020. Government reports anticipate that the average consumer will save 2% to 3% of their energy use each year (which is estimated as saving each consumer £25 to £35).

Equally, it is hoped that the technology will reduce costs to the supplier, a benefit which can be passed on to the consumer. The 'Big 6' energy suppliers generally see smart metering as a means to clean up industry data, which in turn should lead to a reduction in back office requirements to deal with billing and switching complaints.

Furthermore, this initiative will assist the Government's carbon reduction commitment, the principal measure in place being the Carbon Emissions Reduction Target. Homes are responsible for around 27% of total carbon emissions in the UK and it is hoped that the smart metering initiative will reduce the CO₂ emissions by 2.6m tonnes.

Practical implementation

The logistical challenge posed by these proposals cannot be overstated. Replacement of the existing 50 million gas and electricity meters in all households and small businesses by 2020 means, when the deployment starts in earnest in 2012, the average number of replacements required over the following eight years is around 30,000 per working day. Labour mobilisation and meter manufacturing will need to be carefully managed.

Inevitably, smart meters are more expensive than their 'dumb' counterparts. The cost of replacement is estimated by industry sources to be £7bn, working out as £15 per household per year. £10 of this cost will be absorbed by suppliers in cost savings, with the end consumer paying the difference.

Proposed market model

The Government have been considering the most appropriate means of setting up and managing the smart metering technology. The Government report concluded that the preferred market model is the "central communications model". This model would introduce a new body to implement and manage the communication infrastructure and data carriage. The proposal presupposes the communications provider is organised on a national basis and will be procured through tendering for a time-based contract. Suppliers would access the communications



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provider by license. It is anticipated that the meters themselves would be procured from competitive metering markets.

The fully centralised model, favoured by the 'Big 6', comprising a nationally managed communications infrastructure and regional franchises, was rejected as it was considered it would take too long to establish and could negatively affect both competition and innovation. The fully competitive model was predicted to result in the greatest benefits but implementation would prove too costly.

Comment

Putting to one side commentary that the benefits of smart metering have been vastly overstated, there are other concerns. The proposals have not been good for pioneers in smart metering technologies; a compensation fund has been ruled out to cover the costs of replacement of those already in situ where they are not of the new required functionality.

Equally, there are concerns about the procurement of the meters themselves. It remains to be seen how the non-incumbent and small suppliers can obtain the necessary equipment and services at the same cost as the 'Big 6'. It will be interesting to see whether, as a result of the consultation, any provision is made in respect of this moving forward.

The consultation is open until 24 July.

"POTENTIAL AND COSTS OF DISTRICT HEATING NETWORKS"

A report examining the potential and costs of district heating networks was released on 5 May at the Local Authority Community Heating Summit as part of the Department of Energy and Climate Change's ongoing work into the need for, and reform of, policy options to support district heating schemes.

Entitled "Potential and Costs of District Heating Networks" the report, undertaken by Pöyry Energy Consulting and Faber Maunsell, identifies the potential costs and benefits of district heating, assesses the technical potential in the UK and investigates the economic and non-economic barriers to further investment and deployment.

Key issues

Heat for homes, businesses and industrial processes accounts for around 49% of total energy demand and 47% of carbon emissions. The UK has challenging carbon reduction targets and, if the UK is to deliver on its climate change targets, there will need to be a substantive change in the efficiency of heat consumption.

A district heating network (DHN) comprises of centrally produced heat, with hot water piped to nearby buildings. Such schemes have the potential to contribute to the achievement of the carbon reduction targets by improving the efficiency of energy use, especially where heat production involves exploiting combined heat and power or waste heat from existing power stations. District heating also has the flexibility to accommodate heat from a variety of sources, including biomass.



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Although district heating schemes have been operational in the UK since the 1950's, they have only achieved a low market penetration and currently provide only 2% of the UK's heat demand. This is in contrast to other European countries; in Finland and Denmark, for example, district heating is the dominant heat source, accounting for 49% and 60% of total heat supply respectively.

Findings of the report

The Pöyry report assesses the economic potential for DHNs in the UK. Under the high potential scenario, the report states that up to 14% of the UK's building heat demand could be supplied by DHNs. However, to achieve this, the main economic barriers facing new projects would need to be overcome.

Barriers

The report has indicated that unless there is a shift in the present market or regulatory environment, the take up of DHNs in existing building stock is likely to be limited, particularly in the domestic sector.

The main explanation for the low penetration of DHNs to date, is the relatively high costs of providing heat through district heating in comparison with conventional gas or electric based heating systems. The main element of the higher costs of district heating is the network of hot water pipes. For example, under current cost assumptions, a heat network to supply 270,000 households would cost in the region of £1.5bn.

There are some combinations of fuel sources and building types that can reduce the relative costs, for example, where the DHN:

- uses waste heat from conveniently sited power stations (where heat is essentially produced at a very low marginal costs)
- replaces electric heating systems; and
- supplies to commercial premises and high-rise flats in high heat density areas.

However, in order to make DHNs competitive, Pöyry indicate that the following issues must be addressed:

- **project risk:** including lack of industry experience, revenue variability, long term viability (i.e. risk of redundancy if alternative technologies become more competitive) and access to loan capital;
- **project costs:** including schemes with mixed housing stock, lack of established supply chain, lack of standardisation in contract structures, inability to access full revenues from CHP-based schemes (due to the current incentives in distribution charging methodologies to pursue the 'private wires' approach), uncertainties over revenue risks and marketing costs;
- **institutional issues:** lack of public sector leadership (potential private sector investors will be looking for underwriting of the identified project risks by the public sector); and
- **carbon price:** the main benefit (i.e. carbon savings) of moving to such schemes must be fully rewarded.



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DHN potential

The Pöyry modelling indicates that, where DHNs can achieve high penetration in built up urban areas (in the region of 80%), the carbon abatement costs of various district heating options (including waste heat from fossil power stations) can be more cost effective than stand alone renewable technologies. In fact, the Pöyry report says that waste heat from power plants is the most economic heat sources for district heating schemes as long as there is a load of 200MW (equivalent of 50,000 domestic households) within 15km of a power station.

Conclusions

Pöyry's analysis suggests that, under the current market and regulatory conditions, district heating could feasibly provide up to 14% of the UK's non-domestic building heat demand and displace electric heating in around 70,000 dwellings.

If the project development were both de-risked and subject to a higher carbon price through policy interventions aimed at reducing risk, increased local authority responsibility, reduced capital costs and increased potential revenue streams, Pöyry's scenario analysis indicates that it could also be economic to develop DHNs serving up to 1.4 million dwellings in social housing and up to 16.7 million square metres of floor-space in public buildings.

Pöyry advocates taking positive action to develop DHNs and states that "there is no advantage in delaying initiatives to develop DHN, indeed the reverse".

Click [here](#) to access the report.

CLIMATE CHANGE

CARBON CAPTURE AND STORAGE UPDATE

Government announces plans for coal fired power plants

On 23 April, Ed Miliband, Secretary of State for Energy and Climate Change, announced plans to set the demonstration of Carbon Capture and Storage (CCS) as a condition for building new coal fired power stations in the UK. Furthermore a 'full-scale retrofit' of all power plants currently being built (and those currently in the pipeline) will be implemented within five years of CCS technology being independently judged as technically and commercially proven. Hailed by the Chairman of the Environment Agency, Lord Smith, as "*the most significant environmental measure since the introduction of the Climate Change Act*", the Government intends to build four demonstration plants by 2020.

Carbon Capture and Storage (CCS) is a three-step process whereby the CO₂ from power plants and other industrial sources is captured and transported (usually via pipelines) to storage points in safe geological sites such as deep saline formations or depleted oil and gas fields. CO₂ emissions can be cut by up to 90%. There are currently three types of capture technology: post-combustion, pre-combustion and oxyfuel. At present, the technology is largely untested and this announcement is seen as the UK's attempts to set themselves at the forefront of its development.



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The development of this technology is considered key to Government plans to continue the UK's heavy use of coal in electricity generation whilst still reaching targets for reducing CO₂ emissions. A demonstration plant is already operating in Germany and, last month in France, the first ever existing operation was fitted with CCS technology.

By setting CCS as a condition for new coal plants, the UK will still remain reliant on coal, a form of energy production Miliband described as, "*cheap and flexible enough to meet fluctuations in demand for power*". The new demonstration plants will be funded by an incentive mechanism as announced by the Chancellor in the recent Budget. Proposals for how the incentive will work are being considered.

The proposals are hoped to put British businesses at the forefront of CCS technology as well as creating hundreds of jobs. According to a recent report for the Department for Business, Enterprise and Regulatory Reform, the international market for CCS in 2007-08 was worth £13.28bn, of which the UK's share was £468m. This accounts for less than 1% of the international low-carbon technology sector but there is huge potential for expansion, particularly as other governments announce their own plans for CCS development. The sector is predicted to grow by around 4% a year between now and 2015. The CBI responded to Government proposals by issuing a statement that supportively declared, "*it is right for Britain to be part of the global drive towards cleaner coal*".

However, despite this, industry reaction to the Government announcements appears lukewarm. According to the Guardian, energy firms, including E.ON and RWE Npower, are seeking assurances from the Government that they will not have to fit CCS technology to existing plants by 2025 if the technology remains unproven by then. Government plans envisage the technology being proven by 2020 and are working to this deadline. This has alarmed industry leaders who fear the Government will go ahead with plans to fit CCS whether or not the technology is proven to be scientifically and economically viable. Although keen to highlight their support for the technology, they are concerned that they may have to close power plants in 2025 and are seeking assurances that they can keep them open until 2030 or for an additional number of operating hours. Without this assurance, there will be real questions over the financial viability of investing in new coal power plants and, ultimately, in CCS technology. Questions have also been raised about the Government's plans for the Environment Agency to act as an independent judge over the viability of CCS technology.

Further response came from Dorothy Thompson, chief executive of the Drax group, the UK's single largest source of electricity and carbon. Thompson acknowledged that, potentially, CCS technology was the solution to reducing carbon emissions from fossil fuel plants. However, she doubted whether it would contribute anything significant to Government targets for reducing carbon emissions by 34% by 2020. Ms Thompson argued it is more important to cut emissions through strategies, such as co-firing, and raising generating capacity through these strategies sooner rather than later. Importantly, it was pointed out that, should a modern coal-fired station be fitted with CCS today, it would need to generate 25% more electricity just to power the equipment to remove the increased carbon being emitted. Ms Thompson finished with a warning against planning for the future and neglecting the present.

More positively, Scottish First Minister Alex Salmond welcomed the announcement with his belief that Scotland has the storage capacity, natural resources and technology to lead the



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world in CCS development. Speaking at the launch of Opportunities for CO₂ Storage Around Scotland, the first comprehensive study of carbon capture and storage undertaken in the UK, Mr Salmond said the study underlined *"how vast Scotland's potential in CCS"* was.

At present, only an outline consultation has been published by the Government. However, a full consultation is expected to follow this summer. The Government is also consulting on whether there should be a strict emissions limit for any plant that is not retrofitted with CCS technology.

Government publishes response to 2008 EU Directive

The above announcement coincided with the publication of the [Government's response](#) to its 2008 consultation on the proposed EU CCS Directive, with particular regard to provisions dealing with carbon capture readiness (CCR). The closing date for responses to this document is 22 June 2009.

The report sought views on how CCR should be defined, assessed and implemented. The report argued that CCR should be assessed, when considering applications for the construction and operation of new combustion stations, under section 36 of the Electricity Act 1989 (EA). As a rule of thumb, it proposed that no combustion station of 300 megawatts or more should be consented to unless it could demonstrate CCR.

Under section 36 EA 1989, developers will need to ensure they have sufficient space to incorporate carbon capture equipment in the future. Further, they will have to assess the feasibility of retro-fitting carbon capture technology as well as identifying sites for storage of captured carbon dioxide and the feasibility for transporting it.

Universities share £6.9m for CCS research

University researchers from Leeds, Imperial College London, Cambridge, Cranfield, Nottingham and Kent Universities have been awarded a share of £6.9m to fund research into CCS technology. The research will look at creating a stream of carbon dioxide which can be captured by burning coal with a mix of pure oxygen and power station flue gases. The funding for this research comes from E.ON and the Engineering and Physical Sciences Research Council.

Meanwhile, regional development agency, Yorkshire Forward, are working on building a CCS power plant at Hatfield, in South Yorkshire, by pumping the carbon emissions into the rock bed under the North Sea. If successful, they hope to extend this to every coal-fired power station in the region, including Europe's largest at Drax, near Selby.

The European Parliament votes to support CCS schemes

The European Parliament voted, on 6 May 2009, to formally endorse the EU Economic Recovery Plan, aimed to combat the economic downturn by injecting €5bn into the European economy. As part of this, €3.98bn is to be invested over two years into energy projects, spread between CCS, gas and electricity interconnection and offshore wind energy projects. Over €1bn of this has been ear-marked for CCS projects. In addition to the funding for energy projects, the Recovery Plan provides for the investment of €1.02bn into broadband internet connections and rural development across Europe



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EU CLIMATE CHANGE PACKAGE UPDATE

On 23 April, the EU Commission announced that they have formally adopted the Climate Change and Energy Package together with legislation to reduce CO₂ emissions from vehicles and fuel. Following the implementation of "*Directive 2008/101/EC amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community,*" on 2 February 2009, the new Directives are another move to show the commitment of the Commission and Europe to prevent climate change and fulfil corresponding international obligations.

Climate Change and Energy Package overview

The Climate Change and Energy Package covers a multitude of areas within the sector, including aviation, renewable energy and carbon. EU member states agreed to set targets and standards in order to reduce climate change and improve energy efficiency as part of a collective goal.

Commitments under the Package as agreed on 23 April 2009

The package that has been formally adopted falls in line with commitments made prior to adoption. Contracting countries have signed up to reduce greenhouse gas emissions by at least 20% of 1990 levels and to raise the share of energy consumption provided by renewable resources to 20%, by 2020. Additionally the package contributes to the target of improving energy efficiency by 20%.

The new package also seeks to increase the emissions reduction target from 20% to 30%, if international standards are set. At the climate change and energy conference in Copenhagen, in

December, other developed and developing countries will be asked to contribute their share towards this overall target.

New legislation

The Climate Change and Energy Package consists of four legislative texts:

- a Directive revising the EU Emissions Trading System (EU ETS), which covers EU greenhouse gas emissions. This will become effective in 2013 when the next trading period begins. The key differences from previous trading schemes are that the period has been extended from 5 to 8 years and the levels of auctioning will increase rapidly from 4% to just below half.
- an "effort-sharing" Decision setting binding national targets for emissions from sectors not covered by the EU ETS, with a member state target of 21% reduction by 2020 compared to 2005.
- a Directive setting binding national targets for increasing the share of renewable energy sources in the energy mix.
- a Directive creating a legal framework for the safe and environmentally sound use of carbon capture and storage technologies.



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The package is complemented by two further legislative acts that were agreed at the same time:

- a Regulation requiring a reduction in CO₂ emissions from new cars to an average of 120g per km, to be phased in between 2012 and 2015, and further to 95g per km in 2020. This will contribute more than one-third of the emission reductions required in the non-ETS sectors;
- a revision of the Fuel Quality Directive requiring fuel suppliers to reduce greenhouse gas emissions from the fuel production chain by 6% by 2020.

Responses to the Package

The Commission are promoting the success of formalisation of the package. Commission President José Manuel Barroso said on adoption:

"Today we have reached agreement on one of the top priorities of this Commission. The energy and climate change package represents the litmus test of Europe's ability to act for the benefit of its citizens."

By contrast, Dörte Fouquet, director of the European Renewable Energies Federation, argued that the interim targets and penalty mechanisms in the new directives are not strong enough to ensure targets will be achieved. With reference to the Renewable Energy Directive agreed in December she said:

"When you have just a binding target in 2020, a lot is on the shoulders of the Commission to push the member states to do something".

Climate Change and Energy legislation, by nature, has 'long' timescales. Therefore, there is likely to be detailed discussion and analysis of progress in the lead up to 2020.

Going forward

The Directives are expected to be published in the Official Journal this month. The Directives will enter into force 20 days after publication.

The climate change conference in Copenhagen, in December, will see the Climate Change and Energy Package put to non-member states. Here, the full effect of renewable energy objectives will be tested.

BILLS UPDATE

The Climate Change (Sectoral Targets) Private Member's Bill

The Climate Change (Sectoral Targets) Bill had its first reading on 21 January 2009 and was due to have its second reading on 8 May 2009. However, the second reading is now expected to take place on 12 June 2009.

The central aim of the Bill is to help the UK meet its 80% carbon reduction target, whilst trying to ensure that energy needs can be satisfied going forwards. The targets set generally reflect existing Government stated objectives but go a step further by making each of them binding.



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A copy of the Bill has been published and can be viewed by clicking [here](#).

Purpose

The Bill states that its purposes is to:

- help ensure that any targets for the reduction of carbon dioxide emissions in the United Kingdom that are specified in any Act are met;
- help ensure that the energy needs of the United Kingdom, as determined by the Secretary of State, are met; and
- to contribute to international efforts to combat climate change.

Sectoral targets

The Bill has set initial sectoral targets which relate to energy efficiency in residential accommodation and commercial and public services. It has also set targets relating to the quality of electricity generated from renewable sources; the amount of combined heat and power capacity (10GW by 2010) and the number of dwellings with one or more microgeneration installations.

These targets are:

- an increase in the general level of energy efficiency of residential accommodation by a minimum of 20 per cent from the 2010 baseline figure by the end of 2020;
- a decrease in the general level of energy usage in the commercial and public sector by:
 - a minimum of 10 per cent from the 2005 baseline figure by the end of 2010, and
 - a minimum of 10 per cent from the 2010 baseline figure by the end of 2020;
- an increase in the proportion of electricity generated from renewable sources to a level
 - 10 per cent by the end of 2010, and
 - 20 per cent by the end of 2020;
- a total of 10 gigawatts of combined heat and power capacity to be installed by the end of 2010;
- an increase in the number of dwellings with one (or more than one) microgeneration installation to a total of eight times the number of such dwellings which existed at the end of 2007, to be achieved by the end of 2012;
- 80 per cent of dwellings to achieve a Standard Assessment Procedure (SAP) rating of 80 or above by the end of 2016;
- all new dwellings built from the beginning of 2016 to be zero carbon;
- all dwellings occupied by vulnerable households to achieve a SAP rating of 65 or above by 2010.



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The Green Energy (Definition and Promotion) Private Member's Bill

The Bill was presented to Parliament on 21 January with the aim of defining the term “green energy” and of promoting its development, installation and usage. In essence, it seeks to cut out the red tape for microgeneration and to promote energy production and energy efficiency measures, improving the planning process and making the installation of small-scale electricity and heat generation easier and more economically viable.

The Bill had its second reading on 8 May 2009. During the second reading, Mr Ainsworth commented that the Bill is

'...meant to be helpful to industry and investors, who are urgently looking for clear and simple support from legislation affecting their businesses. It is meant to be helpful to the farming industry in developing its potential as a significant source of energy generation in rural areas. It is intended to be helpful to people living in fuel poverty, and to all who are struggling to pay for electricity and heating, and who are dependent on inefficient fossil fuels; helpful to all who want to play their part in reducing CO₂ emissions; and helpful to the Government in meeting their own targets on fuel poverty, renewable energy and climate change.'

Greg Barker commented that the

'...message is that the microgeneration agenda has come of age. That agenda has been pulled from the fringes of politics and the energy debate into the mainstream. That is not only because of climate change, but because of how technology is advancing and how the consumer's interest is now about becoming more involved, rather than just being a passive recipient of energy. The rising cost of old fossil fuels means that people are becoming more energy-efficient and want to play a more active role in energy production.'

A copy of the Bill was published on 24 April 2009 and can be viewed by clicking [here](#).

Purpose

The Bill states that its principal purpose is the promotion of green energy. “Green energy” means energy generated from renewable or small-scale low-carbon local sources and includes energy efficiency measures. Any person performing any functions under the Act must do so having regard to:

- the promotion of green energy;
- the desirability of alleviating fuel poverty; and
- the desirability of securing a diverse and viable long-term energy supply.



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Actions to be taken

The Bill also tasks the Secretary of State to do the following, once the Act comes into force:

- within 12 months, publish a revised microgeneration strategy;
- review permitted development orders;
- make regulations within three months to amend the Town and Country Planning (General Permitted Development) (Amendment) (England) Order 2008 (SI 2008/675) for the purpose of granting permitted development status to specified microgeneration installations;
- disregard any estimated increase in the value of a property arising from the installation of an energy efficiency measure or a microgeneration system for the purpose of assessing council tax or non-domestic rates payable on that property.

Renewables Content Obligations Private Member's Bill

The Renewables Content Obligation Bill aims to make provision for the establishment of minimum levels of recyclates in designated products and classes of product and to establish a scheme for the certification of designated products.

The Bill was introduced to Parliament on 25 February 2009 and is due to have its second reading on 3 July 2009.

A copy of the Bill was published on 6 May 2009 and can be viewed by clicking [here](#).

Renewables content obligation

The Bill states that the Secretary of State may, by an Order, impose on each product manufacturer a renewable content obligation. This is an obligation to produce to the appointed administrator evidence which shows that, during the specified period, the specified amount of renewable content of designated products was manufactured in or imported into England and Wales.

A certificate will be issued to certify that the supplier to whom it is issued has supplied the amount of renewable content in the designated product or has procured the amount of renewable content in an imported product set out in the certificate.

If a person does not wholly discharge his renewable content obligation a penalty may be imposed.



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INTERNATIONAL UPDATE

AUSTRALIA

Australia postpones its emissions trading scheme: Amid lobbying from business that the scheme will detract from growth, the Australian Government has postponed the country's carbon trading scheme by a year to 2011.

BRAZIL

The National Agency for Electrical Energy in Brazil announces the country's first wind auction: Bids have been invited from generators for the supply of wind energy over a 20 year period beginning in January 2012. According to a report released by the Organisation for Energy Research, despite the country's current low level of wind generation (installed capacity of 359MW) there is apparently potential for 143,000GW onshore.

Brazil and Japan plan to partner on CDM: It is reported that the Japanese Bank for International Cooperation (JBIC) has signed a loan agreement worth \$50m with the Brazilian bank, Unibanco, for the development of Clean Development Mechanism projects in Brazil.

CANADA

Canada's environment minister announces moves to boost the take up of CCS: Jim Prentice, the Canadian environment minister, has announced that new regulations will be introduced this year that will prevent the replacement of old coal fired plants with new coal fired plants, unless they incorporate Carbon Capture and Storage technology. Surviving plants would also be subjected to emissions caps.

CHINA

China triples wind power target by 200% to 100GW by 2020: According to China Daily, the National Energy Administration of China announced, on 5 May, that China is aiming for an annual wind power growth rate of 20% for the foreseeable future. Current installed windpower capacity is 12GW.

EU plans to fund a CCS plant in China by 2015: It is reported that the EU commission is drawing up plans to build a Carbon Capture and Storage plant in China as early as 2015. The EU and China had previously agreed on a partnership project in 2005 for building a fossil fuel plant with CCS technology by 2020.

GLOBAL

The World Bank is considering launching new carbon funds to support emissions reductions in least-developed countries: Joelle Chassard, manager of the bank's carbon finance unit, has said that they are "toying with the possibility of establishing a second generation Community Development Carbon Fund". The first fund, created in 2003, made available \$130m to nine governments and 16 private firms in developing countries.

World has "1 trillion tonne emission budget": A new study published in the American journal 'Nature' claims that, in order to prevent runaway climate change, the maximum greenhouse gas emissions that can be emitted in the period between 2000 and 2050 is 1 trillion tonnes.



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POLAND

EU climate change package to cost Poland €50bn: A report by analysts PointCarbon, claims that Poland will need to invest €50bn in its Emissions Trading Scheme sectors to meet the EU 2020 emissions reductions targets.

RUSSIA

Russian government endorses draft climate plan: The policy paper calls for incentives for the sustainable use of natural resources and a shift to energy-efficient technologies and renewable energy sources, together with a structural change to the country's economy to adapt to new extreme weather conditions and help mitigate the effects of climate change. Environmental NGOs have been critical of the plan's focus on adaptation rather than efforts to reduce emissions.

UNITED STATES

Biofuels rule laid out by the US Environmental Protection Agency: The EPA has launched a 60 day public comment period on its plan to ensure that the supply of renewable fuels in the US reaches 36 billion gallons by 2022. Renewable fuels from new production facilities would be required to reduce 'lifecycle' greenhouse gas emissions (i.e. emissions over the life of the fuels) by at least 20% relative to the lifecycle emissions from petrol and diesel.

US cap-and-trade bill revised: Negotiations have continued between House Democrats resulting in a more 'industry friendly' bill. The 2020 target of 20% below 2005 levels has been reduced to 17%. However, the long term goal of reducing emissions 83% below 2005 levels by 2050 remains unchanged. With regard to allowances, 35% will be allocated for free to the power sector based on retail sales and historical emissions. By 2030 all allowances would be auctioned.

Americas Energy and Climate Partnership proposed: At the fifth summit of the Americas, on 18 April, President Obama invited countries of the region to participate in an Energy and Climate Partnership; "a voluntary and flexible framework for advancing energy security and combating climate change". Countries would be encouraged to suggest ideas for cooperation, including on energy efficiency, renewable energy, cleaner fossil fuels and energy infrastructure. President Obama also asked Secretary of Energy, Chu, to advance further cooperation with his counterparts this June in Peru at the Americas Energy Symposium.

US Wind Industry calls for mandated renewable energy targets: Lack of credit and low energy prices have forced the wind power sector to call for legislation that would demand 25% of the US' electricity be generated from renewable sources by 2025.

California votes to adopt regulation reducing greenhouse gas emissions from transport fuels: California's Air Resources Board voted for regulations which will mandate a reduction of greenhouse gas emissions from transportation fuels by 10% by 2020.

US regional carbon markets may merge: Reuters has reported that the eastern US carbon market (the RGGI which covers New York and nine other states) may link with the Western Climate Initiative and developing markets in the Midwest. The current federal cap-and-trade bill does not envisage a national market until 2012.



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SUSTAINABLE DEVELOPMENT AND HOUSING

LOW CARBON ZONES – GLA LAUNCH

The pledge

At the HRH Prince Charles' May Day Summit on Climate Change, the Mayor of London announced that the London Development Agency (LDA) would provide £3m to develop 10 flagship Low Carbon Zones (LCZ). Six new LCZ will join the existing four pilot projects in Elephant and Castle, Mitcham, Wembley and Barking, with each zone expected to receive £200,000 from the LDA as well as funding from third party investors.

Low Carbon Zones

Currently, more than three quarters of London's carbon emissions are produced by homes and commercial buildings. The Mayor has committed to reducing London's carbon emissions by 20.12% in 2012. The overall goal is to reduce carbon emissions by 60% in 2025. If these targets are met, they will demonstrate what must be done to reduce emissions by 80% in 2050. The 10 flagship LCZ will showcase how this can be achieved using the latest energy efficiency technologies.

In order for effective implementation of the LCZ initiative, the local authority will work together with the community, local businesses and major energy providers. Funding of these projects will need to provide innovative ways to bring together the latest energy efficiency technologies to cut carbon emissions. Homes and commercial buildings in the chosen zones will benefit from a range of carbon preventative measures such as:

- home insulation;
- smart meters to help people regulate their energy use;
- decentralised energy plants to produce heat and electricity locally;
- renewable energy sources such as solar panels; and
- facilities to use waste as a clean fuel source.

The zones will be spread out across central and outer London and will include a range of buildings, tenures and businesses. Each LCZ could be as small as a street or could even be an area of over 1000 buildings. The idea behind spreading out zones of varying sizes is so that they will catalyse an uptake around the rest of London for the LCZ initiative.

GLA'S support

The GLA are asking Boroughs who want to set up a LCZ to build a Consortium. The Consortium should bring together energy suppliers, members of the Local Strategic Partnership and local delivery and community partners. Together, they will bring about carbon saving measures to the public, local businesses and public sector buildings.



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A realistic goal?

Energy suppliers such as EDF and British Gas as well as the Energy Saving Trust have welcomed and indicated their support for the injection of funding into the LCZ initiative by the Mayor. Peter Hofman, EDF Energy Director for Sustainable Future Responsibility, commented that:

'Everyone has a part to play in tackling climate change. That is why we welcome the announcement by the Mayor of London of the creation of Low Carbon Zones across the city We are extremely supportive of schemes which help to encourage people to consider and reduce the environmental impact they may have.'

Not only are the LCZ intended to reduce carbon emissions, they are also intended to stimulate employment by creating an estimated 15,000 jobs for the initiative and to reduce energy bills.

However, some commentators have indicated that the proposed funding will fall far short of what is required to make the zones truly carbon friendly. The Green Party's Darren Johnson welcomed the proposals, but warned that they were seriously underfunded. He commented:

"Given that it takes an estimated £11,000 for a home to achieve the 80 per cent cut in emissions needed, it is very disappointing that the mayor is only offering £3m...Unless much more is invested, only about 280 London homes will be made truly carbon friendly."

In order to solve the potential funding problem, the Mayor has agreed to encourage the private sector to become involved in the initiative and will continue to lobby for their financial support in the run up to applications deadline on 31st July 2009.

Timetable

The guidance from the GLA provides a timetable for application and implementation of the LCZ's:

1 May 2009	Launch application process.
1 June 2009	LCZ and CESP Workshop at City Hall.
31 July 2009	Deadline for applications.
August 2009	Short listing and follow up meetings with applicants.
September 2009	10 LCZ's announced.
March 2010	End of year 1.
March 2011	End of year 2.
July 2012	Olympics and completion of supported phase of LCZ programme.



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The Climate Change and Energy group provides clients with access to expertise and experience in low carbon development, policy and regulation, renewable energy and clean tech, sustainable buildings and development, as well as clean coal, oil and gas. The group is successfully drawing on extensive experience in energy, water and waste regulation and utility procurement, as well as fund raising and fund management, property development, planning, construction and litigation in the climate change and energy sectors.

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