

Climate change: the government's proposals to meet the energy challenge



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FOLLOWING THE 2006 ENERGY REVIEW AND resulting report 'The Energy Challenge' (released 11 July 2006), the government published its Energy White Paper on 23 May 2007, setting out its long-term strategy for tackling climate change and ensuring secure, clean and affordable energy.

The White Paper has been published at a time when the issue of climate change has never been higher on the political agenda. Global energy demand is predicted to rise by 50% by 2030 and the UK will need 30-35 gigawatts (GW) of new electricity generating capacity in the next two decades, as many coal and most nuclear power stations close and it becomes a net importer of oil and gas.

The Energy Review was keenly awaited and it will impact on all businesses in some way. Those not directly generating or supplying energy will have to grapple with the government's new energy efficiency and carbon reduction measures. Lawyers as individuals will have to cope with the changes to our domestic lifestyle that will result.

The White Paper's proposals are aimed at helping to achieve the government's four energy policy goals:

- to put the UK on a path to cutting CO₂ emissions by some 60% by about 2050, with real progress by 2020;
- to maintain the reliability of energy supplies;
- to promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and improve... productivity; and
- to ensure that every home is adequately and affordably heated.

This article highlights some of the key features of the White Paper and assesses its likely impact on UK businesses. The White Paper is accompanied by many other consultations on different aspects of the government's strategy and those affected should take advantage now of the limited opportunity to lobby for any changes they need.

ENERGY EFFICIENCY

The Carbon Reduction Commitment

In the 2006 Energy Review Report the government committed itself to delivering carbon savings of 1.2 million tonnes of carbon (mtC) per year by 2020 from large commercial and public sector organisations. In the White Paper, the government confirmed its intention to introduce a mandatory cap and trade scheme, called the Carbon Reduction Commitment (CRC).

CRC will target emissions from energy use only by organisations whose mandatory half-hourly metered electricity consumption is greater than 6,000MWh per year. This would generally capture those with annual electricity bills above £500,000 and could include organisations such as hotel chains, supermarkets, local authorities and banks.

The CRC will target both carbon emissions from direct fuel use and indirect carbon emissions from electricity. To avoid overlap with existing measures, the CRC will not target emissions covered by Climate Change Agreements (CCAs) nor direct emissions covered by the EU emissions trading scheme (ETS).

Organisations with over 25% of their energy-use emissions in CCAs would be completely exempt. It is envisaged that ultimately CRC 'allowances' will be distributed to participants via an auction process. Participants will determine their own emissions targets within the scheme. The revenue produced by the sale/auction of allowances will be recycled to participants by means of a simple, direct, annual payment proportional to average annual emissions since the start of the scheme, with a bonus/penalty depending on the organisation's position in a CRC league table. The CRC will feature a buy-only link to the ETS, through which the CRC participants will be able to buy EU allowances under the existing ETS as a way of meeting their commitment.

It is intended that there will be an introductory phase, with a simple fixed-price sale of allowances to allow participants to get used to the scheme. At the end of this phase, a judgement will be made on whether it would be cost-effective and proportionate to extend the scheme to organisations with lower energy consumption. The scheme may therefore eventually affect a far greater number of organisations than will be caught by the current proposal.

Carbon emissions reduction target

The Energy Efficiency Commitment (EEC), which requires gas and electricity suppliers to achieve targets for the promotion and delivery of energy efficiency into their customers' homes, will be replaced by a new carbon emissions reduction target for the period 2008-11. This will have the same framework and underlying purpose as the EEC but will require suppliers to double their efforts and, in particular, encourage their customers to move towards a greater use of microgeneration. The details of this new scheme are the subject of a separate consultation.

Energy Performance Certificates

Following the European Directive on the Energy Performance of Buildings (No. 2002/91/EC) and the

requirement to produce Energy Performance Certificates (EPCs) within the upcoming Home Information Packs, the government will consult later this year on the requirement to display EPCs in business premises in England and Wales. EPCs will be required for new buildings and any property that is rented or sold. They will provide an energy rating (from A to G) for those buildings and will set out what steps can be taken to improve energy efficiency. It is hoped that this will provide an important aid to businesses in meeting their climate change commitments and give buyers and renters of premises transparent and accurate information on the premises' energy running costs.

Smart metering for business users

The government will consult on its proposal that energy suppliers should extend the mandatory installation of advanced meters, which provide readings on either an automatic half-hourly basis for electricity or on a daily basis for gas, to all but the smallest British business users within the next five years. Together with energy-saving advice, this should enable businesses to make informed decisions about investment in energy efficiency.

Making all new homes zero-carbon from 2016

In the consultation 'Building a Greener Future: Towards Zero Carbon Development', the government proposed future changes to Building Regulations, such that by 2016 all new homes built in England will be zero-carbon. This means that, over a year, the net carbon emissions from all energy use in the home would be zero, and would be achieved by improving the energy performance of the home and increasing the use of renewable and low-carbon sources of energy, either installed in the individual home or supplied to an entire development.

It is also expected that, within ten years, all domestic energy customers will have smart meters with visual displays of real-time information that allow communication between the meter, the energy supplier and the customer. The government has engaged in a further consultation on this matter and will announce its policy timetable for zero-carbon housing later this year.

Enhanced energy efficiency policies

The European Directive on Eco-Design of Energy Using Products (EuP) (No 2005/32/EC) will deliver mandatory measures to improve the energy efficiency of a range of products. Within this, the government is prioritising the reduction of stand-by power and lighting standards. This includes a commitment to regulate against and commence phase-out of inefficient light bulbs before the European Commission's deadline of 2010.

Biofuels

The government has also made a clear commitment towards cleaner transport through incentivisation of the use of biofuels. This includes extending the 20-pence-per-litre differential for biofuels to 2009-10, which, alongside the Renewable Transport Fuel Obligation (RTFO), will mean a 35-pence-per-litre incentive in that year.

The RTFO requires transport fuel suppliers to ensure 5% of total fuel sales are from renewable sources by 2010-11. This is expected to rise after that date, provided that the quality and economics of biofuels remain acceptable.

RENEWABLE ENERGY

The government has confirmed its commitment to the Renewables Obligation (RO) as the principal means of driving the deployment of renewable electricity in the UK. The RO places a mandatory requirement for UK electricity suppliers to source a growing percentage of electricity from eligible renewable generation capacity. Suppliers are required to produce evidence of their compliance with this obligation to the Office of Gas and Electricity Markets (Ofgem). Evidence can be via certificates, referred to as Renewable Obligations Certificates (ROCs)

The government is committed to the existing RO levels (increasing to 15.4% by 2015) and to retaining the RO until 2027, although the White Paper does not specify any RO levels for the period beyond 2015-16.

A commitment to raise the RO to 20% on a 'guaranteed headroom' basis is proposed so that the obligation level is only raised when the growth in renewables generation justifies it. The current obligation levels will be raised if they are likely to be exceeded by the level of renewable electricity generation on the system. This is aimed at giving confidence to the renewables industry that the value of ROCs will be secure.

The government has decided not to break the link between the buy-out price under the RO and the Retail Prices Index (RPI) from 2015-16 (contrary to its proposal in the 2006 Energy Review Report).

Banding

Undoubtedly the biggest news in the renewables proposal is the long-awaited conclusion on banding the RO. Banding will result in a change to the direct 1:1 relationship of one ROC being awarded for each megawatt hour (MWh) of electricity generation.

As from 1 April 2009 the government proposes to 'band' the RO to differentiate levels of support to renewable technologies to maximise the

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PROPOSED BANDING REGIME

Band	Technologies	Level of support (ROCs/MWh)
Established	Sewage gas; landfill gas; co-firing of non-energy crop (regular) biomass.	0.25
Reference	Onshore wind; hydro-electric; co-firing of energy crops; energy from waste with combined heat and power (CHP); other not specified.	1.0
Post-demonstration	Offshore wind; dedicated regular biomass.	1.5
Emerging technologies	Wave; tidal-stream; advanced conversion technologies (gasification, pyrolysis and anaerobic digestion); dedicated biomass burning energy crops (with or without CHP); dedicated regular biomass with CHP; solar photovoltaics; geothermal.	2.0

contributions from established and emerging technologies. Banding means that technologies could be awarded more or less than one ROC for each MWh of electricity they produce, depending on the technological development and associated costs. The aims are to bring forward emerging renewable technologies, increase deployment and improve the overall cost-effectiveness of the RO but it is clear that there will be big winners and losers from the scheme.

The government's proposals are based on four technology bands, covering a range from the lowest cost established to the highest cost emerging technologies. It is proposed that the bands will be fixed until March 2013 in the first instance, with the exception of co-firing, for which the support will be adjusted 'according to need'. The current proposals are set out in the table above.

Grandfathering

To avoid upsetting the economics of current and planned projects, all projects that:

- (a) have either commenced operation before 1 April 2009; or
- (b) have received planning permission and pre-accreditation from Ofgem by that date and subsequently commence operation within two years,

will remain eligible for one ROC per MWh if the project would otherwise be eligible for less than one ROC per MWh due to the introduction of banding.

For existing projects that would fall into a higher band following the introduction of banding, those projects that became operational after 11 July 2006 will be eligible for the higher number of ROCs. However, those that were operational before that date will remain eligible for one ROC per MWh only.

The Planning White Paper

On 21 March 2007, the government published a separate Planning White Paper, 'Planning for a Sustainable Future', which also targets climate change through substantial reductions in carbon emissions from new commercial buildings within the next ten years. Red tape will be reduced by extending permitted development rights on microgeneration to non-residential types of land use, including commercial and agricultural development. At present, most commercial land users lack 'permitted development rights' – allowing them to make minor changes to their buildings without needing planning permission. This proposal aims to allow commercial land users to install their own small renewable energy measures without needing to seek permission.

In tandem with this, the Planning White Paper aims to effectively promote the UK's shift towards using renewable and low-carbon sources of energy. This will include setting out a national policy statement on renewable energy. By clarifying the policy framework, the government hopes to ensure that local planning decisions on renewable energy are made effectively and help to deliver national objectives.

Nuclear energy will also be affected through the new consenting process for nationally significant

infrastructure projects in England and Wales. These will now be decided on by a new infrastructure planning commission (IPC) – an independent body comprised of experts from a range of fields. The aim is to enhance the transparency of the process by establishing a clear separation between policy-making and the taking of quasi-judicial decisions in relation to infrastructure projects.

Offshore gas development

The Energy White Paper proposes to rationalise the different offshore gas development consent regimes into a single consent regime with a harmonised set of requirements and procedures. This will include legislation modernising the regulatory framework, creating a ‘fit for purpose’ licensing regime for offshore gas storage and unloading of liquefied natural gas. Alongside this, the government will move to provide new guidance to assist potential investors in gas storage projects and the associated infrastructure under the existing planning system.

Improving electricity grid access

The White Paper also highlights the difficulties faced by renewable generators in obtaining access to the grid. The White Paper highlights the government’s commitment and the ongoing steps that are being taken to develop early connection opportunities for the most viable renewables projects and to establish an offshore transmission regime that will enable offshore generators to connect to the onshore grid in an economical, efficient and timely manner.

NUCLEAR NEW BUILD

Now to one of the big news stories of the Energy White Paper: the predicted view on new nuclear power. The White Paper sets out an indication of the government’s view that nuclear new build is necessary to deliver security of supply and reduced carbon emissions. A major public consultation – ‘The Future of Nuclear Power’ – will now run until 10 October 2007.

The government believes nuclear power is needed as part of a diverse and flexible energy mix, alongside other low-carbon options, renewables, gas and coal with carbon capture and storage (CCS).

In February 2007, Greenpeace dealt a blow to the government’s nuclear plans by obtaining a High Court ruling that the government had not yet properly consulted on the issue. The White Paper errs on the side of caution and discloses a huge amount of information in support of the preliminary view that ‘it is in the public interest to give the private sector the option of investing in new nuclear power stations.’ The government will make a final decision this year.

The White Paper details a number of proposed steps that the government wants to take now to assist the delivery of new nuclear developments, should the preliminary policy be adopted at the end of the year.

Perhaps most central to this facilitative action is the consultation paper on ‘Proposed Processes for Justification [a legal process that a nuclear developer needs to go through justifying why a new nuclear plant is needed when balanced against public health] and Strategic Siting Assessment’ [picking and evaluating where new nuclear stations are likely to be built]. The consultation closes on 10 October 2007. Work in all these spheres and more will need to be running now, concurrently with the consultation exercise, to have any hope of meeting the indicative timescale being suggested by the government in the White Paper.

A consultation on ‘Managing Radioactive Waste Safely’ will consider the proposed implementation framework for the geological disposal of the UK’s higher activity radioactive waste, including the approach to site selection. A geological repository is seen as the long-term solution, with safe and secure on-site interim storage facilities likely to be required until any such repository is ready to receive waste.

SUMMARY

While its range is extensive, it is clear from the outset that the White Paper 2007 has the potential to create both winners and losers. Among those benefiting will be:

- developers of renewables technologies – especially those involved in wave, tidal and advanced conversion technologies, the biomass and offshore wind sectors;
- the nuclear lobby; and
- homeowners wanting to establish small-scale renewables projects.

However, those likely to be disadvantaged include:

- perhaps controversially, local objectors to large-scale planning infrastructure applications;
- generators of landfill gas; and
- commercial and public sector large-scale electricity users.

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