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Sustainable Development Intelligence: Avoiding the Carbon Crunch

Camco provides its clients and partners with applied insights into the sustainable development, environmental and carbon markets. This newsletter provides an overview of recent climate policy developments with a specific focus on UK business. Further information can be provided on specific policy items and forthcoming regulations on request. Contact details are shown on the back page.

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January
2009

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Sustainable Development Intelligence: Avoiding the Carbon Crunch

Survival is the name of the game for businesses in 2009. In recent months we have seen several big names fall and there are others expected to go the same way shortly. Much of this financial crisis has been predicated on the use of limited financial capital to leverage “sophisticated” debt derivatives as a novel means of profit generation. There are parallels between the challenges of this global credit crunch and the now inevitable global climate change we face. (i) Limited capital, be it financial or natural capital, is being leveraged to achieve unsustainable economic growth. (ii) No-one fully understands the scale of the recession or of the climatic change we face as a society, although it is generally accepted that the situation is dire on both counts and will be worse if we do not act in the short term. (iii) Those of us who do make it through the credit crunch will be expected to leave a more sustainable low carbon legacy.

The rules of the global economy will change over the next five years and many expect President Barack Obama to take the lead in establishing a new global deal. This deal will need to encompass economic recovery, combating terrorism and climate change.

The direction of travel is clear: significant cuts in GHG emissions are required during the coming years; and organisations that provide low carbon solutions and individuals who adopt them should be rewarded financially.

It is expected that a significant part of the UK’s required 80% carbon reduction, but not all of it, can be achieved at or below £40/tCO₂, the forecast price for carbon in the EU ETS in 2020. This is significant because very few organisations and individuals incorporate the cost of carbon in their financial planning, let alone a cost set at this level.

Change: USA Energy & Climate Policy

The response to Obama’s new economic team has generally been positive, but his choice of climate change team has received a ringing endorsement from environment commentators, and forcefully demonstrates the President’s intent. The message is clear: the new President believes that climate change is real and the new administration is going to act differently to the Bush Administration to combat this challenge.

The appointment of John Holdren as Assistant to the President for Science & Technology is much welcomed as he is a highly reputable Harvard Academic and an expert in the application of science and technology to sustainable development goals. As described in his Science paper “Science & Technology for Sustainable Well-being”¹ he will be encouraging the new President to act not just on climate change and the protection of ecosystem services, but also on international development to alleviate poverty and poor health. As Director of the White House Office of Science & Technology Policy, this physicist will mark a new direction in US policy.

1: Holden, John P. “Science and Technology for Sustainable Well-Being.” *Science* 319.5862 (January 25, 2008): 424-434.

Holdren’s position is reinforced by the appointment of Stephen Chu, a Nobel prize-winner, to lead the development of alternative energy sources at the Department of Energy. Former Environmental Protection Agency Chief, Carol Browner, will fill a new “climate tsar” role co-ordinating energy, climate and environmental policy and respected marine ecologist Dr Jane Lubchenco will lead the National Oceanic & Atmospheric Administration.

This is the core team that will help Obama & Biden deliver on the following commitments set out in their *New Energy for America* plan:

- help create five million new jobs by strategically investing \$150 billion over the next ten years to catalyze private efforts to build a clean energy future
- within 10 years save more oil than the USA currently import from the Middle East and Venezuela combined
- put 1 million Plug-In Hybrid cars - cars that can get up to 150 miles per gallon - on the road by 2015
- ensure 10 percent of USA electricity comes from renewable sources by 2012, and 25 percent by 2025
- implement an economy-wide cap-and-trade program to reduce greenhouse gas emissions 80 percent by 2050.

(Note. Camco’s US offices and staff are available to help UK clients better understand US climate change developments).

Policy and regulation

UK and EU Policy

This fundamental shift in US policy is important for the UK because progress on international climate change agreements post-2012 has been hindered by the Bush Administration, which in turn has influenced the boldness of UK and European policy formation. Despite the reluctance of the Bush Administration to constructively contribute to international climate policy there has been considerable progress in national and regional policy. This is combined with an increasing consensus on what action is required, namely:

- reduce our reliance on oil
- efficient carbon pricing and market operation
- decarbonising the electricity grid using advanced coal, carbon capture and storage (CCS), nuclear and renewable energy
- energy efficiency in buildings & industry
- reduced emissions from transport, including biofuels
- enabling sustainable, low carbon lifestyle choices
- energy research, development and demonstration.

In December 2008 the EU Council of Ministers reached agreement on European climate policy to 2020, including the future of the world’s largest emissions trading market, the EU ETS. This includes a commitment to reduce greenhouse gas (GHG) emissions 20%

by 2020, which could increase to 30% if a global agreement is reached in the Copenhagen UNFCCC negotiations in December 2009 which is more likely with the co-operation of the USA.

The much anticipated UK Energy Act 2008 and Climate Change Act 2008 were published in the final weeks of the year. These important pieces of legislation are the latest iteration of the UK Climate Change Programme published in 2006 and set a framework for domestic policy initiatives in the final years of the Kyoto agreement to 2012. They will be administered by the new Department of Energy & Climate Change (DECC) headed by Ed Milliband, and their effectiveness is enhanced by the passing of the Planning Act 2008 and Planning & Energy Act 2008 administered by the Department for Communities and Local Government (CLG).

Energy Act 2008

The new Energy Act supports the uptake of renewable energy and energy efficiency measures in a number of ways:

- The Act extends the Renewables Obligation, and introduces banding to provide more flexibility in the level to which different technologies are supported
- it introduces a microgeneration (<5MW) feed-in tariff as a fiscal incentive for small-scale generation
- it clarifies issues regarding the licensing of Smart Meters
- it introduces a renewable heat incentive.

This followed the publication of the shorter Planning and Energy Act 2008 which received Royal Assent on 13 November 2008. This Act provides that local authorities in England and Wales may include policies in their development plan documents imposing reasonable requirements for low carbon and renewable energy, and energy efficiency standards that exceed the building regulations.

Climate Change Act 2008

The new Climate Change Act establishes the climate and emissions reduction policy framework for the foreseeable future, including:

- a legally binding 80% GHG emissions reduction target for 2050 compared to 1990 levels, and at least 26% by 2020, including international aviation and shipping
- domestic carbon budgeting designed to deliver reductions in 5-year periods starting in 2008
- a requirement for Annual Statements on GHG emissions from company activities
- a new Committee on Climate Change
- the ability to introduce new trading schemes to encourage mitigation actions, including the Carbon Reduction Commitment (CRC)
- climate change adaptation provisions
- the introduction of financial incentives for the reduction of domestic waste and increase of recycling.

Planning Act 2008

The Planning Act should substantially impact the business conditions of both renewable energy developers and those organisations with potential development sites. The Act creates a new integrated planning system designed to reduce our reliance on fossil fuels and accelerate the creation of a new generation of renewable energy infrastructure and includes:

- the unification of eight existing regimes for nationally significant infrastructure into a single consent regime
- the development of eleven National Policy Statements detailing national infrastructure priorities on issues such as energy, aviation, road and rail transport, water and waste
- the establishment of a new Infrastructure Planning Commission (IPC) to take independent decisions as to whether to allow individual projects to go ahead, operating within the framework set by ministers
- statutory timetables for inquiries and decisions with the expectation that the timetable from application to decision will fall to under a year in the majority of cases
- the introduction of a Community Infrastructure Levy (CIL) to ensure that costs incurred in providing infrastructure to support the development of an area can be funded (wholly or partly) by owners or developers of land.

Sustainable Communities Act 2007

Together with the new 2008 Acts mentioned above this legislation provides a strong basis for local action on climate change in those areas which have adopted the Act, see www.localworks.org for a list. The first quarter of 2009 is important for putting forward proposals, through citizen panels, which deliver sustainable communities in four categories:

1. Local economies, e.g. promoting local shops, local businesses, local public services and local jobs.
2. Environment, e.g. promoting local renewable energy and protecting green spaces.
3. Social inclusion, e.g. protecting local public services and alleviating fuel poverty and food poverty.
4. Democratic involvement, e.g. promoting local people participating in local decision making.



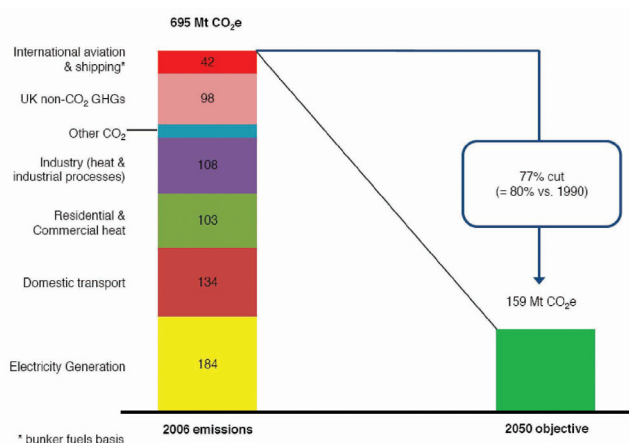
Actions and opportunities

Building a Low Carbon Economy

The first Committee on Climate Change (CCC) report² arrived in December at a difficult time in terms of the economy. In the twelve months ahead UK GDP is predicted to fall by between 1.1%³ and 2.5%⁴. UK interest rates, inflation and Sterling are expected to continue to fall as well.

Yet the CCC has recommended that the UK must adopt an 80% carbon reduction target based on the present scientific and economic knowledge, as our share of a 50% global reduction target. This is a challenging target and is expected to cost in the region of less than 1% of UK GDP⁵ by 2020 and 1%-2% of UK GDP by 2050, although this is still cheaper than the cost of inaction. This level of cuts is in line with the latest Intergovernmental Panel on Climate Change (IPCC) Assessment Report 4 published in 2007 and is required to stabilise atmospheric concentrations of GHG and avoid a temperature increase above 2°C which is likely to result in catastrophic climate change.

Figure 2.1 The scale of challenge



Source: UK National Atmospheric Emissions Inventory (2008).

Two budgets are set by the CCC; 'Intended' and 'Interim'. The Intended budget is predicated on reaching global agreement on carbon reduction commitments and the Interim budget is what we are targeted to achieve in the meantime.

The Intended budget sets a 42% reduction on 1990 levels by 2020 (31% relative to 2005), equivalent to a cumulative reduction of 175 MtCO₂e. This can be achieved through combined action in three main areas:

- energy efficiency improvement in buildings and industry
- fuel efficiency improvement in road vehicles
- a significant shift towards renewable and nuclear power generation and renewable heat.

Unlimited trading of carbon credits in the EU ETS, so called European Union Allowances (EUAs), will be allowed to reach this target together with limited use (i.e. up to 20%) of "offset" credits

like Certified Emissions Reduction credits (CERs) from non-EU regulated international schemes such as the Clean Development Mechanism (CDM).

Decarbonising the electricity grid

There are three main large-scale generation technologies which are expected to deliver between 2008 and 2022: onshore and offshore wind; nuclear; and carbon capture & storage (CCS). It is expected that wind will deliver a 30% reduction in grid emissions by 2020, of an expected total of 40% (equivalent to 50 MtCO₂e) with a potential contribution from new nuclear generation.

Energy use in buildings & industry

The introduction of energy efficiency measures in existing homes is expected to deliver a reduction of 9-18 MtCO₂e. The improvements to the existing stock will be delivered in part through the Supplier obligation Carbon Emission Reduction Target (CERT) programme administered by Ofgem as well as improved domestic appliance standards. The proposed microgeneration feed-in tariff and the Renewable heat incentive are both intended to help achieve this target by delivering up 10 MtCO₂e of reductions.

An additional 4 MtCO₂e savings from new build are expected through "zero carbon" policies, currently subject to a Government consultation published in December 2008 and ending 18th March 2009. Through the consultation document, the Government has acknowledged that the current definition of zero carbon cannot be met through on-site energy solutions alone and has proposed a more flexible arrangement with a minimum requirement for on-site energy efficiency and total carbon reduction, and a set of allowable off-site solutions.

In non-domestic buildings energy efficiency savings of 5-9 MtCO₂e are expected and a further 2 MtCO₂e from microgeneration and renewable heat. Industrial energy efficiency is expected to deliver a further 4-6 MtCO₂e.

Reducing domestic transport emissions

Up to 12 MtCO₂e of emissions reduction can be achieved if a European agreement can be reached to cap emissions from new cars at no more than 100g/km by 2020 (VED Band A). Another 3 MtCO₂e can be delivered from vans under a similar arrangement. Demand side measures, such as encouraging a modal shift away from the car could deliver an additional 10 MtCO₂e.

Agriculture & waste sectors

Emissions reduction of up to 15 MtCO₂e from agriculture and 5 MtCO₂e from improved waste treatment are two areas where the potential for significant emissions reduction have been identified.

2. *Building a Low Carbon Economy - The UK's Contribution to Tackling Climate Change (Committee on Climate Change, 1 December 2008)*

3. OECD

4. *Capital Economics, Oxford*

5. UK GDP in 2007 was approximately £1,400bn and is expected to grow by 30% to 2020.

Market Demand

Regulatory certainty and consistency are prerequisites for financial markets to operate in climate change mitigation. A coherent policy framework at local, regional and national level is therefore being demanded by the financial markets. For example, three international investment groups responsible for managing €4 trillion of assets - the Institutional Investors Group on Climate Change, the Investor Network on Climate Risk and the Investor Group on Climate Change - recently published a joint statement⁶ asking for:

- a global emissions reduction target in the range of 50%-85%, with targets for developed countries in the region of 80%-95% and medium term targets for developing countries in the region of 25%-40%
- a role for developing countries including national action plans
- an expanded international carbon market as well as greater scale and reform of the CDM
- investment in energy research, development & deployment
- agreement to reverse deforestation and support afforestation, as well as
- a global climate adaptation agreement.

The Clean Tech investment market is one of the few financial sectors expected to continue to outperform in 2009. Recent investments have shown how companies preparing for a low carbon economy are bucking the downward trend.

6: Investor Statement on a Global Agreement on Climate Change, November 2008

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Opportunities for action



At Camco we are helping our private and public sector clients to act on the many opportunities, as well as managing the many risks, presented by rapid change in regulatory and market conditions in the move towards a low carbon society. If you would like to discuss how your organisation might convert its climate change liabilities into sustainable assets then please contact Camco on 01225 812102.

- Carbon footprinting and accounting
- Climate change risk assessment and adaptation strategies
- Low carbon investment optimisation
- Organisational strategy & positioning
- Energy efficiency in existing homes & non-domestic buildings
- Low and zero carbon homes & buildings
- Industrial resource efficiency and energy management
- Carbon markets and carbon credits, including Clean Development Mechanism (CDM), Joint Implementation (JI) and EU Emissions Trading Scheme (ETS)
- Carbon Reduction Commitment (CRC) compliance
- Renewable electricity generation & the Renewable Obligation
- Microgeneration & the feed-in tariff
- Renewable heat generation
- Behavioural change, including transport demand side management
- Agriculture, forestry and land use
- Advanced waste treatment
- Low carbon lifestyle solutions for consumers
- Energy research, development & deployment