briefing

Energy & Environment - October 2009

All change please

In its first progress report "Meeting Carbon Budgets – the need for a step change" the Committee on Climate Change calls for a "fundamental review" of energy and carbon markets, and a rapid acceleration in consents and funding if the UK's carbon budgets are to be met.

The Committee's Report raises serious doubts as to the adequacy of the current regulatory and fiscal measures to achieve the Government's own targets: "Progress in reducing emissions in the five years before the first budget period, both overall and in most sectors, was far slower than now required to meet budget commitments". Current market rules should be reviewed "to mitigate risks that investment continues to flow predominantly to conventional fossil fuel generation." The Report recommends reform of current energy efficiency measures and outlines the scope for emissions reductions through road pricing, increasing the efficiency of the transport system and an integrated approach to land use planning. And the Committee's overall conclusion: "a step change in the pace of reduction is essential."

Background

The Committee on Climate Change, established under the Climate Change Act 2008, is responsible for advising the Government on the five yearly carbon budgets required to achieve carbon emissions in the year 2050 which are 80% lower than the level in 1990. It is obliged to report annually on progress made towards meeting the budgets and the overall target, to identify any further progress needed and to indicate whether the budgets and the overall target are likely to be met.

In May 2009, the Government adopted the carbon budgets recommended by the Committee for the periods 2008 to 2022. The Committee released its first progress report on 12 October 2009: http://hmccc.s3.amazonaws.com/21667%20CCC%20Report%20AW%20WEB.pdf. It will release a further report covering aviation later in the year.

Recognising that its ability to assess progress towards achieving carbon budgets, as well as the long term target, was hampered by the absence of verified emissions figures for 2008 and distortions produced by the recession, the Committee concentrated on defining the framework for further reports; establishing a series of indicators of likely levels of emissions, including "implementation indicators" - key policy milestones and high level policy design required to establish appropriate detailed measures.

The Climate Change Act imposes duties on the Secretary of State to ensure that the 2050 target is realised and to prepare such proposals and policies as he considers will enable the carbon budgets to be met. He is also obliged to report to Parliament on his response to reports from the Committee; the first such response being due in January 2010. In view of the fact that by and large the Climate Change Act commanded all-party support, the Committee's reports can be expected to be highly influential in the development of future energy policy.

Emissions

The Committee observes that the EU Emissions Trading Scheme (EU ETS) has proved vulnerable to severe price fluctuations caused by the recession, undermining the case for investment in low carbon technology, with market signals further eroded by uncertainty as to the position post-2020. In the absence of EU action to increase and stabilise the carbon price, the Committee advocates unilateral action by the UK, suggesting a tax that adjusts in response to EU ETS price fluctuations to deliver a minimum price for UK carbon (an approach recently advocated by the Conservative Party).

Commercial Property

The Carbon Reduction Commitment (now renamed the CRC Energy Efficiency Scheme) is reserved for later scrutiny. But, on the basis that Government and

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local authorities "cannot be credible leading a programme to reduce emissions without cutting their own emissions", the Committee considers, with an optimism which, given the state of public finances, may be somewhat disingenuous, that "all cost-effective emissions reduction potential (e.g. heating controls and energy efficient boilers) in central and local government buildings and public sector buildings covered by the CRC should be realised by 2018".

Energy Efficiency/Heat – CCC Implementation Indicators	
Finalisation of heat and energy saving strategy	2009
Completion of new financing mechanism pilots	2011
Renewable heat incentive operational	April 2011
Legislative framework replacing carbon emissions reduction target	2011
EPCs for all non-residential buildings	2017
DECs for all non-residential buildings	2017
Non-residential buildings to have EPC rating of F or higher	2020

The Committee criticises the lack of a policy framework for SMEs which are currently unaffected by direct emissions caps and suggests a range of measures such as Display Energy Certificates (DECs),(which show the actual energy use of buildings and associated CO2 emissions on an annual basis) for all non-residential buildings; a requirement for a minimum Energy Performance Certificate (EPC) rating on the sale or letting of non-residential property; and linking business rates to EPC ratings. The Committee also advocates increased financial support for investment in energy efficiency - interest-free loans, for example.

Domestic property

According to the Committee, current energy efficiency policy for the residential sector "is not well designed to address the range of barriers to energy efficiency improvement". Research commissioned by the Committee suggests that less than half of emissions reduction potential through energy efficiency improvement would be achieved if the Carbon Emissions Reduction Target (CERT), a mechanism which requires energy suppliers to promote energy efficiency improvements in the sector, was extended until 2022.

In its Heat and Energy Strategy Consultation published earlier this year, the Government outlined proposals to replace CERT with a scheme that involves consumers taking long-term loans to finance the up-front costs of energy efficiency improvements, rather than these costs being spread across the customer base of energy companies, perhaps with loans being attached to the property. However, the Committee concludes that these proposals fail to meet one of the main criteria for effective policy, namely strengthening financial incentives through subsidies: a number of key measures (for example solid wall insulation) would not result in a net cost-saving in the short to medium term even with low cost long-term finance; even where net savings could be demonstrated, homeowners and commercial landlords are likely to be unwilling to take on long-term loans for energy efficiency. The Committee advocates retention of some form of financial support under the new arrangements, both in general and specifically targeted at the fuel poor, in order to provide adequate uptake incentives.

Electricity markets

Electricity Market – CCC Implementation Indicators	
Implementation of transmission access review	2010
Agreement on incentives for investment in transmission system reinforcement	2010
Tendering process for first connections under an enduring regulatory regime for offshore transmission	2010
Review of current market Arrangements	2009 - 2012
Planning approvals for grid reinforcement	Various (2011 – 2014)

The current market rules for the electricity sector are such that, in the view of the Committee, investment in low-carbon generation may not be pursued. Analysis commissioned for the Report suggests that under the current arrangements there are risks of "unnecessarily high" prices for consumers and that the required level of decarbonisation will not be achieved. "We should not accept the significant risks and costs associated with the current market arrangements" – arrangements which were only introduced in 2001 and which were extended to include Scotland as recently as 2005. The Committee calls for a "comprehensive review" in the near term, reporting that its "extensive discussions with a wide range of industry stakeholders – energy companies, analysts, academics – suggest a strong consensus that current arrangements will not deliver a low-carbon power generation system through the 2020s,

and that changes to the current arrangements are both required and inevitable".

In addition to calling for the reform of electricity trading arrangements and carbon price support, the Committee's suggestions for stimulating investment in low carbon generation include:

- extending the Climate Change Levy exemption to all new low-carbon generation;
- low carbon feed-in tariffs;
- tenders for new low carbon generation;
- a second competition for carbon capture and storage plant;
- a maximum emissions intensity for generation at a company or site level; and
- direct market intervention through the creation of a low-carbon obligation aimed at suppliers and/or generators.

Carbon Capture and Storage – CCC Implementation Indicators	
Announcement of winner of the CCS Demonstration Project competition	2010
Announcement of winner of a Second CCS Demonstration Project competition	2011
Authorisation and planning consent for first competition winner	2011
Authorisation and planning consents for second competition winners	2012/2013
Establishment of long-term support framework	2016

The Report highlights the importance of resolving one specific issue currently affecting generators: long term access rights to the transmission system. A long-standing problem, transmission access rights are currently the subject of consultation by DECC following its rejection of the auction-based approach favoured by Ofgem.

Renewables

The Report is critical of the Renewables Obligation, the principle mechanism for supporting renewable energy developments, finding that it provides investors with a "less certain return than could other forms of intervention". Not only are investors exposed to fluctuations in the electricity price reflecting volatility in fossil fuel and carbon prices, but the price of ROCs (tradable green energy certificates) varies year by year depending on the quantity of renewable energy generated. The Government is already consulting on one of the modifications advocated by the Committee – a mechanism to stabilise the price of ROCs by linking their price to fluctuations in electricity prices, although such a change would require primary legislation scheduled for the end of 2010, so the prospects of implementation are questionable. In the meantime, the current administration is pressing forward with proposals that entrench the Renewables Obligation, extending it by another ten years to 2037, and which, in many respects, increase the uncertainty for investors, for example through temporary banding measures and extending participation to overseas renewable energy projects from selected European countries.

Nuclear– CCC Implementation Indicators	
National policy statement and strategic siting assessment	2010
Regulations for a funded decommissioning programme	2010
Generic design assessment	2011
First planning approval	2011

The Committee's recommendation that a loan guarantee scheme should be established to protect investors against a renewable energy project's inability to service debt may sit ill with the Government's penchant for off-balance sheet debt, although the Committee claims that, "correctly designed" with suitable guarantee pricing and risk coverage, such a scheme could be self-financing. Other suggestions, for example, greater use of feed-in tariffs and a system of tendering for new low carbon generation with fixed electricity sale prices, appear to be fundamentally opposed to ongoing expansion of the Renewables Obligation.

Heat

It is notable that, in implementing the 2008 Energy Act, the Government opted for a Renewable Heat Incentive (RHI) rather than a renewable heat obligation modelled on the Renewables Obligation. The RHI will take the form of an obligation on fossil fuel suppliers to make fixed payments for renewable heat production, with the costs, to use the prevailing euphemism, "socialised" across all fossil fuel consumers. Although the Committee welcomes the RHI, it notes that the cost of achieving the target set out in the Government's Renewable Energy Strategy could be "very expensive at the margin". Originally scheduled for publication over the course of the summer, DECC's consultation paper on the detailed design of the RHI has yet to be released.

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Transport

According to the Committee, electric cars are already substantially less carbon intensive than conventional models. Therefore, irrespective of the level of progress made in de-carbonising the UK's electricity generation portfolio, the Committee emphasises the importance of achieving a critical mass of electric cars in the period up to 2022. It estimates that the total subsidy for electric vehicle purchase necessary to achieve this is likely to be considerably higher than the Government's £250 million commitment, suggesting that £800 million may be nearer the mark. The Committee also calls for funding of up to £230 million for pilot projects to develop the infrastructure required to support recharging and battery exchange.

Planning

Although the Committee welcomes the new Infrastructure Planning Commission for major new generation projects and other key infrastructure developments such as high voltage electricity lines as constituting progress, it notes the risk that the Commission may not work as intended and that the new regulatory framework may be subject to judicial review and subsequent change. Applications for smaller generation projects of less than 50 MW on land and 100 MW offshore continue to be dealt with under existing arrangements, with local planning authorities, according to the British Wind Energy Association, taking on average 14 months to determine applications. Applications which go to appeal and applications for larger projects and offshore developments take considerably longer.

Planning – CCC Implementation Indicators	
< 12 months average planning period for onshore and offshore wind farms	2009 onwards
Integrated planning and transport strategy	2011

The Committee believes that the average time taken to determine all categories of wind farm planning applications needs to be reduced to less than 12 months with immediate effect. It also calls for the swift processing of planning applications for the necessary transmission infrastructure.

The Committee calls for a new planning strategy to ensure that land use planning decisions fully reflect implications for transport emissions, so as to prioritise urban regeneration over new out-of-town settlements, public transport infrastructure and the development of infrastructure to support electric cars.

Conclusion

The Report advocates a degree of decisiveness with respect of energy policy which has been sadly lacking from Government in the past several years. Although the two major political parties are both committed to green rhetoric so that following the forthcoming election either of them may be in a position to claim that they are mandated to make the necessary changes, many of the Committee's recommendations entail substantial financial support. In the current economic climate, it remains questionable whether there is truly the appetite or resources required for the enhanced carbon price and extensive public investment necessary to achieve the step-change envisaged by the Committee.

In its initial Project Discovery report on energy markets released at the beginning of October 2009, Ofgem considered future prices under a range of scenarios. The regulator's initial predictions suggest that electricity price rises of between 14% and 23% by 2020 will result from scenarios involving widespread adoption of low carbon technology. But if the UK fails to achieve its carbon budgets and there is a strong recovery in the global economy, Ofgem predicts price rises of as much as 60% by 2016 before prices gradually fall back to levels comparable to those predicted for the low carbon and slow growth scenarios in 2020. Although the Committee's Report presents politicians with some potentially expensive options, the price of inaction may, if anything, be higher.