

# Under the hammer

Trading schemes are about to put a more realistic value on carbon emission savings and provide a greater reward for energy efficiency



The Informed Executive examines the scope of the European Trading Scheme and the UK's own Carbon Reduction Commitment

The sterling-dollar exchange rate has been a fixture at the end of news bulletins since the pound started to float in the '70s: it was joined by the rate for the euro a few years later when that currency assumed a trading status. As a result, most viewers and listeners with even half an interest in world affairs will have an idea of what the pound will buy in the US and Europe.

It will probably take a little longer for the market price of carbon in Europe to assume the same status, though the psychological importance of seeing the price quoted on Newsnight could serve as a call to action for anyone even remotely involved in the process of reducing emissions. As this editorial focus on energy has sought to establish, it makes economic sense to reduce the consumption of resources that involve carbon dioxide, and what better incentive could there be than seeing quoted the cash value of every tonne saved?

Having an understanding of the market price of emissions is also an important factor in the decisions which executives across the public and private sector must make in determining energy strategy.

While the need to trade carbon 'credits' is currently confined to the larger entity and those in specific energy-intensive sectors of the economy, the whole process of carbon pricing and environmental levies filters down to even the smallest organisation which is paying for that facility within every unit of conventionally-sourced energy drawn down.

Like currencies, the 'credits' generated by emitting less carbon dioxide than the rules will permit under a given scheme are traded on a daily basis; the price fluctuating by the odd decimal place of a euro per tonne of emissions.

# EU scheme finds CO<sub>2</sub> budgets and carbon management systems being established for the first time

It is therefore worth taking a closer look at those rules for carbon trading, how they are evolving, and what the impact might be on the executive decisions that have to be made about sourcing energy.

The fact that some of the schemes will not come into force until 2009 or later is immaterial. Projects which involve capital purchases today will be 'funded' by financial savings over the lifetime of the schemes which are now crystallising out in, quite literally, the corridors of power.

## European Carbon Trading

To the extent that the EU's Emissions Trading Scheme (ETS) is already well established, energy observers have visibility of the market at work. In terms of the number of participants involved, ETS is the largest trading scheme of its kind in the world, but whether the economic principles on which it was based are either valid or sustainable is a more complex issue.

Have the limits on carbon output been set too generously, for example, so that the 'value' of improving upon those targets is worth rather less than Monopoly money?

Certainly in terms of its scope, the Emissions Trading Scheme would appear to be targeting the right kinds of business. Of all the 'greenhouse' gases identified under Kyoto, only carbon dioxide was covered by ETS at its outset, while the marketplace is getting to grips with the process.

Its brief was to focus at first on those organisations which emitted carbon dioxide in heavy industrial quantities.

Specifically, the emissions covered are from the large producers of the gas in power and heat generation, and in selected energy-intensive industrial sectors such as combustion

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plants, oil refineries, coke ovens, iron and steel plants. It also includes factories making cement, glass, lime, bricks, ceramics, pulp and paper. Whether an organisation qualifies, even though it may be in one of the listed industries, is determined by its scale of operation.

Despite these restrictions on the scope of its first phase, ETS encompassed around 11,500 installations and accounted for some 45% of the EU's total CO<sub>2</sub> emissions (or 30% of its overall greenhouse gas emissions). In theory at least, therefore, any attempt to rein in the carbon impact of those businesses must make a positive contribution.

The EU maintained when it launched ETS in 2005 that the scheme " . . . would give European and foreign-owned businesses based in the EU a 'first-mover' advantage through the invaluable early experience they are gaining."

## EU rationale challenged

Central to the business case was that, due to mandatory monitoring and reporting of emissions, companies are establishing CO<sub>2</sub> budgets and carbon management systems for the first time. The EU put forward the view that, "...because CO<sub>2</sub> has a price under the scheme, companies are engaging the ingenuity of their

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# EU scheme meets obligations at half the cost of default compliance with Kyoto Protocol

engineers to identify cost-effective ways to reduce their emissions, both through improving current production processes and investing in new technologies.”

That theory only turns into practice so long as the price is meaningful and provides sufficient of an incentive to fire the “ingenuity of their engineers”.

Ever keen to see employment created where there had previously been no economic necessity, the EU noted that “A whole range of new businesses has emerged in Europe as a result of the EU carbon market: carbon traders, carbon finance specialists, carbon management specialists, carbon auditors and verifiers. New financial products such as carbon funds have entered the market.”

The carbon trading arena has already moved on further than that into the more questionable territory of carbon offsetting. As we have already observed in our introduction to this study, the desire of well-meaning individuals and organisations to limit net emissions has spawned a sub-culture of businesses prepared to ‘offset’ carbon emissions - at a price, of course.

Taking ETS back to first principles, the scheme was intended to allow the EU to achieve its obligations under the Kyoto agreement at a fraction of the cost which it would otherwise have incurred. The costs of ETS were estimated at between •2.9 billion and •3.7 billion each year compared with default compliance of up to •6.8 billion a year.

There is a strong case increasing the number of annual allocations under ETS Phase 2 from the planned level of 7% in the UK as this would better encourage participants to take action to reduce their emissions and increase the financial benefits of working within quotas. Targets in Phase 2 of the ETS, which runs from 2008 to 2012 are tougher, and the market price is expected to reflect this.

## National targets for emissions

The process of reining in carbon emissions under ETS is through targets assigned to each EU member country, which in turn allocates the quota to the organisations which fall within the scope of the scheme.

These national allocation plans are established in conjunction with the EU but are administered by the appropriate organisation within each country.

In the UK, the responsible party is the Department for Environment, Food and Rural Affairs (DEFRA); the implementation being delegated to the Environment Agency.

The first phase of ETS has run from 2005 to 2007, and lessons are being learned before the scheme moves on to the next framework. The fact that the carbon allocations assigned to each country, and then on to the qualifying organisations, were all made at zero financial cost tends to undermine the principle of a natural market.

If an organisation had already committed to making emission cuts at the time the allocation was made, it is relatively easy for it to come under target and therefore have a carbon ‘credit’ to sell, thereby generating a useful revenue stream at no cost to itself.

Not having paid for the allocation in the first instance, there is no incentive – apart from the inherent energy cost savings – to maximise the number of credits earned.



## Auction essential to create value

As Chris Davenport, the Environmental and Water Services Business Manager for energy consultants McKinnon & Clarke Ltd, noted, recommendations for the ETS are that allocations should be auctioned so that they have a financial value and there is instantly a large incentive to do something about energy savings.

McKinnon & Clarke are licensed traders in energy emissions so Davenport has been monitoring developments with close interest. "The present system finds us with a carbon price that is heavily depressed, at under 10 euro cents for a tonne of CO<sub>2</sub>. Critics say that if you are going to drive actions, it has to be made worthwhile and have a real cost of not doing so. If it costs a company more than the market price to get its emissions down, there is no incentive at all."

There are those who argue that there is a strong case increasing the number of annual allocations under ETS Phase 2 from the planned level of 7% in the UK. They point out that doing so would better encourage participants to take action to reduce their emissions and increase the financial benefits of working within quotas.

"Targets in Phase 2 of the ETS, which runs from 2008 to 2012 are tougher, and the market price is expected to reflect this. Any further development of the scheme would involve increasing the number of sectors covered and including a wider range of greenhouse gases."

## Carbon Reduction Commitment

Participation in the European Trading Scheme has not precluded the British government from taking its own actions on the energy saving front. The Energy White Paper of 2007 intro-



The UK's Carbon Reduction Commitment uses an auction trading platform to re-allocate emissions credits. At its launch in 2010, the scheme will target organisations of every description which consume more than 6000 MWh of power each year. It encompasses organisations like banks, supermarket chains and Government departments.

duced the concept of the Carbon Reduction Commitment, or CRC.

Again mandatory, the CRC uses an auction trading platform to re-allocate emissions credits. At its launch in 2010, the scheme will target organisations of every description which consume more than 6000 MWh of power each year. In monetary terms, that is a spend of £500,000, so it encompasses organisations like banks, supermarket chains and Government departments.

The developers of the CRC scheme argue that the 4,000 to 5,000 organisations to be covered by the scheme should be able to achieve

Allocations in the EU Energy Trading Scheme should be auctioned to give them a financial value and provide a real incentive for those involved to do something about energy savings.

# New UK scheme aimed at operations producing total of 51 million tonnes of CO<sub>2</sub> annually

greater benefits through energy saving than it will cost them to comply. If the UK government has its figures right, the prospect of seeing the reduction in overheads appear as additional revenue should spur those organisations into action.

The emission savings from each organisation do not have to be large in order to make an impact, however, The operations being targeted currently produce an estimated 51 million tonnes of CO<sub>2</sub> annually, or about 10% of emissions across the whole UK economy.

The CRC scheme has been aimed at qualifying organisations as a whole rather than their constituent sites or branches. The way it is being planned would find that an organisation which fails to improve upon its designated consumption threshold, would have to report on its total energy use emissions including subsidiaries – whether or not those units met their own thresholds.

Participants will purchase allowances corresponding to their planned emissions due to energy consumption. The government will cap total energy emissions by limiting the number of allowances available for auction each year.

## Climate Change Agreements

To avoid overlap with existing measures, the CRC will not cover direct emissions within the EU ETS or those within a Climate Change Agreement. A Climate Change Agreement (CCA) is a vehicle which allows energy intensive businesses to agree quite stringent carbon saving programmes with the government.

In exchange, they receive an 80% discount from the Climate Change Levy, In addition, organisations with over 25% of their energy use emissions covered by CCAs will be completely exempt from the CRC scheme.

## Climate Change Levy

For the record, the Climate Change Levy is a tax on the use of energy in industry, commerce and the public sector, with offsetting cuts of 0.3% in employers' National Insurance Contributions and additional support for energy efficiency schemes and renewable sources of energy. The aim of the levy is to encourage users to improve energy efficiency and reduce emissions of greenhouse gases.

According to DEFRA, CRC will be broadly revenue neutral to the Exchequer. The auction revenue will be recycled to participants by means of a simple, direct, annual payment proportional to average annual emissions from the start of the scheme.

There will be a bonus or a penalty depending on the organisation's position in a CRC league table. The fine print of these points are being worked out after a further round of consultations. Participants in the CRC will also be able to purchase (but not sell) emission allowances from the EU Energy Trading Scheme at a price that is the higher of the EU ETS price or the minimum CRC floor price.

## Transition

In order to ease participants into the new regime, and to allow government to establish more accurate data on emissions across the target sector, CRC will feature an introductory phase, with a simple fixed-price sale of allowances.

The experience gained from the first phase of the CRC will determine whether it would be cost effective and proportionate in its impact, to extend the scheme in due course to organisations with lower energy consumption. §

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