

20 20 BY 2020 – THE COMMISSION IS ON THE RIGHT TRACK

Simon Tilford, Chief Economist, CER

In recent years, the EU has been accused of introspection and an obsession with institutions. However, one area where this is definitely not the case is the environment, where the Commission, aided and abetted by a number of powerful member states, has been very active. In January 2008, the European Commission finally published its Green Energy Plan.¹ The package aims to reduce EU emissions of greenhouse gases by at least 20% by 2020 from 1990 levels, increase to 20% the share of renewable energies in energy consumption over this period and increase to 10% the proportion of vehicle fuels that are plant-based, as agreed by EU leaders in March 2007. The volume of emissions permits issued under the EU's emissions trading scheme (ETS) will be reduced year-on-year to allow for emissions covered by the ETS to be reduced by 21% from 2005 levels in 2020.

EMISSIONS TRADING

The EU is right to put emissions trading at the heart of the drive to reduce emissions of greenhouse gases. Emissions trading works by setting a limit on emissions of carbon dioxide and by distributing permits to emit the gas to polluters. If a firm emits more than its allowance it has to buy additional permits, while unused allowances can be sold. Companies, therefore, have a financial incentive to use energy more efficiently. Emissions trading is a more effective way of meeting a target than setting a carbon tax, as it is very difficult to determine the level at which the tax would need to be set in order to meet the target.

The first stage of the EU's emissions trading scheme, from 2005 to 2007, was associated with exceptionally low carbon prices because emissions caps were too generous.² When negotiating national caps for the second phase of the scheme (from 2008-2012) the Commission adopted a much tougher line with EU governments. Nevertheless, the combined caps represent only a 6.5% decline compared with 2005, and there is a risk that member states will be able to meet most – if not all – of the reductions in their emissions simply by investing in projects abroad. As a result, there is a risk that prices will be too low to stimulate investment in low carbon technologies. Moreover, only half of the member states intend to auction any permits and only one – Denmark – is expected to auction the maximum 10% allowed. As a result companies in sectors where there is little competition,

1. European Commission, "20 20 by 2020: Europe's climate change opportunity", January 2008.
2. Simon Tilford, "How to make emissions trading a success", Centre for European Reform, October, 2007.

such as power generation, will continue to earn windfall profits. Finally, the burden-sharing agreement provided excessively generous caps to poorer member states – a very poor model for what we need to achieve globally, which is to decouple economic growth in emerging markets from emissions.

The Commission's recommendations published in January address many, though not all of these concerns. The Commission proposes that:

- From 2013 the ETS will expand to cover almost half the EU economy. The volume of permits issued under the ETS should decline from 2.1 billion tonnes of carbon dioxide in 2005 to 1.7 billion in 2020.

- National caps should be replaced by an EU-wide cap that is consistent with the Union's overall target for emissions reductions. In order to iron out discrepancies across countries, permits will be set by sector, not by country.

- The third phase of the ETS should run for eight years until 2020, in order to provide security for investors.

- The coverage of the scheme should be extended to include the petrochemicals, ammonia and aluminium sectors as well as nitrogen oxide emissions from the production of various chemicals.

- Carbon capture and storage will also be covered. Any carbon dioxide that is captured and stored using CCS technology would not be counted as emitted.

- There should be greater harmonisation of monitoring, reporting and verification rules.

- The proportion of permits to be auctioned should be increased gradually to two-third from 2013. Power utilities should pay for all their permits from 2013.

- In the absence of an international agreement, internationally exposed energy-intensive industries, such as steel and cement production and aluminium smelting, would either receive permits for free or importers of such products would be required to buy permits.

In addition to setting out recommendations for reform of the ETS, the Commission puts forward proposals for how to distribute the Union's overall targets for emissions of carbon dioxide and use of renewables among the member states. The allocation will be determined by reference to the existing energy mixes, topography and GDP per capita (poorer member states will be given more time to increase their reliance on renewables). Industries covered by the ETS that are based in poorer member states will receive

relatively more permits under the ETS than those based in wealthier countries. Poorer members will not have to increase their dependence on renewable energy sources as rapidly as wealthier ones.

The Energy Green Paper was at the top of EU's March 2008 summit. Recommendations brought forward by the Commission aim to improve the functioning of the ETS considerably. For example, replacing national caps with an EU cap comprising pan-EU sectoral caps distributed to the individual member states would be a big step forward. From a strictly economic perspective, it does not matter whether companies in the same sectors are treated differently in different members of the EU; what matters is that across the EU as a whole there is a shortage of carbon permits and hence a market price for carbon. But this ignores the distorting effect that inconsistent treatment across member states can have on competition and hence on the EU's internal market. If companies in a particular industry in one member state face tighter caps than comparable companies in another member state, it will distort competition and undermine political support for the scheme. Forcing power utilities to pay for all their permits is also a necessity as they are largely shielded from international competition. Such a move would put an end to the windfall profits that power companies are making by passing on the costs of carbon permits that they receive for free. Centrica, a UK-based power utility, estimates that power companies will make €110bn between 2008 and 2012 in this way.

However, in a number of areas the recommendations fall short of what is needed. Most importantly, the institutional reforms do not go far enough. The EU's overall emissions targets, and the allocation of emissions permits under the trading scheme, should be decided on objective and scientific criteria – not by political horse-trading.

Similarly, independent institutions would have been better placed to resist pressures for excessively unequal burden-sharing. The Commission's recommended burden-sharing agreement is a very poor model for the challenge the world faces: to stabilise emissions in emerging economies at a low level by decoupling emissions from economic growth. Europe can hardly turn round to the Chinese and the Indians and demand that they take steps to curb their emissions, when the EU is largely exempting much wealthier states than China or India from having to take such action. Indeed, we risk repeating the mistakes made with the lesser developed members of the EU-15. For example, Spanish emissions of greenhouse gases rose by 47.9% between 1990 and 2004, closing much of the gap in per capita emissions between Spain and the more developed EU countries.

If the EU's ETS is to provide a model for the kinds of global institutions that will be needed to achieve a global carbon market, it needs to be depoliticised. The EU should establish two fully independent institutions to run and oversee the scheme. The first, a European Environmental Board, should distribute national emissions caps to the 27 member states, allocate emissions permits under the emissions trading scheme, carry out the auctioning of emission permits, and establish strict guidelines for the use of auction

revenues. The second institution should be a fully independent EU-wide regulatory body to oversee the carbon market, a European Carbon Market Authority. This would ensure that trading is transparent and that the market operates efficiently.

Finally, encouraging much greater use of biofuels is not the right way to curb emissions from road vehicles. With a few exceptions, biofuels are much more carbon-intensive than their advocates claim and the use of land for fuel rather than food production, threatens to exacerbate incipient inflation in agricultural prices. A more efficient way to curb vehicle emissions would be to impose steadily more stringent emissions targets. The Commission's proposed target of 130 grams per kilometre by 2012, with some allowances made for makers of bigger (and hence thirstier vehicles), should be agreed. A substantially more ambitious target can then be set for 2012.

THE EU CAN AFFORD TO CUT EMISSIONS

Can the EU afford to cut its emissions if others do not? Probably, the threat to the EU's overall competitiveness should not be exaggerated. The EU does all kinds of things that impose costs on certain industries. For example, EU countries impose extensive pollution standards and rigorous health and safety regulations, as well as comprehensive regulations governing working hours and quality standards. Some of these measures arguably boost the competitiveness of European companies by forcing them to apply the most up to date technologies and by encouraging them to make the most efficient use of labour. Policies aimed at curbing emissions of greenhouse gases should be seen in the same light.

Research by the OECD shows that the potential negative effects of carbon prices, even on energy intensive industries, are smaller than feared and that the overall effect on the economy is, on the whole, positive. The OECD argues that a more climate friendly economic framework can improve cost efficiency.³ Anything that encourages European businesses to adopt energy efficient technologies will stand them in good stead in a world of increasing energy scarcity, and strengthen the EU's energy security. Tight emissions caps and stringent energy efficiency standards would enable Europe to consolidate its existing lead in many energy efficient technologies, as well as help European companies to set global technical standards.

In any case, Europe is not going to be on its own. There are now real grounds for optimism that the US will establish a federal emissions trading scheme within the next three years, even if there is still doubt over the likelihood of the country participating in a successor to Kyoto. Although the Bush administration has largely ignored concerns over climate change, state-based trading initiatives, public opinion, the US Supreme Court

3. OECD, "The benefits of climate change policies", 2004.

and crucially, corporate America, are intensifying pressure for federal action to cut emissions of greenhouse gases. Congress is currently working on various such cap-and-trade bills and Barack Obama, Hillary Clinton and John McCain all support mandatory caps on emissions and a US emissions trading scheme. The outlines of a federal cap and trade scheme have been worked out by Congress and a US carbon market could emerge as early as 2009, though 2010 is more likely.

In the absence of federal action, individual states have taken the initiative. California has passed legislation to cut greenhouse gas emissions by 25% by 2020 (from 1990 levels), while New York plans cuts of 30% by 2030 (again from 1990 levels.) Both states intend to bring about these reductions through the adoption of emissions trading schemes similar to the EU ETS. The government of Florida, the fourth most populous US state, has announced plans to lower emissions to 2000 levels by 2017, and to just 20% of their 1990 level by 2050.

In a landmark judgement, the US Supreme Court ruled in April 2007 that the US Environmental Protection Agency (EPA) had violated the country's Clean Air Act by refusing to regulate emissions of greenhouse gases. The ruling, the response to a lawsuit filed by 12 states and 13 environmental groups, also called into question the legality of the EPA's refusal to impose controls on emissions from other sources. The Supreme Court is currently considering a similar lawsuit questioning the EPA's decision not to regulate the greenhouse emissions of power plants. Supreme Court decisions are no substitute for a legislative response to global warming, but will reinforce the arguments of those pushing for such a comprehensive solution.

Public opinion in the US has been slower to register concern about climate change than in most EU countries, which has made it easier for the Bush administration to drag its feet. But recently there has been a sea change in US public awareness of the scale of the problem. The percentage of Americans who say global warming is a serious problem has risen from 70% in 2004 to 83% today.⁴ Pressure from civil society groups, such as the influential evangelical churches, is also growing. These churches are increasingly concerned about the impact climate change will have on the world's poor, as well as on subsequent generations of Americans.

Contrary to fears that the EU would hand the US an unfair competitive advantage by unilaterally moving to put a price on carbon emissions, it is US companies that fear for their competitiveness, at least in future growth industries. A powerful coalition of US firms has joined forces with US environmental groups to form the United States Climate Action Group. The group comprises such household names as General Electric, DuPont, Caterpillar and Alcoa, together with non-governmental organisations including the Pew

4. Yale University office of public affairs, "Sea change in public attitudes toward global warming emerge; climate change seen as a challenge as terrorism", July 2007.

Center on Global Climate Change and the World Resources Institute. It is demanding mandatory cuts of emissions of greenhouse gases and the establishment of a federal cap and trade scheme.⁵ Aside from genuine concern about the impact of climate change, US businesses fear that the Bush administration's refusal to accept that the country cannot continue to emit carbon dioxide as in the past will disadvantage them in new growth markets, and threaten them with more costly adjustments in the future.

Opinion in the Senate has moved a long way since 1997 when senators voted overwhelming to reject any measures to cut emissions of greenhouse gases unless accompanied by big concessions on the part of developing countries. At the time of writing there are multiple climate change bills before Congress. Most contain similar emissions reduction strategies, relying on emissions regulations and emissions trading. The most ambitious bills introduced to date are the Jeffords-Boxer / Waxman and Kerry-Snowe bills, both of which require cuts in greenhouse gas emissions to just 20% of 1990 levels by 2050.⁶ The highest profile bill, however, is the Lieberman-Warner bill (titled America's Climate Security Act of 2007). This builds on a previous bill submitted by Senator Lieberman and one of the leading Republican contenders for the presidency, John McCain, but also incorporates elements of other bills. Lieberman-Warner calls for the lowering of greenhouse gases emissions by 60% from their current levels by 2050, a federal cap and trade scheme covering around 80% of the US economy, and the establishment of a number of independent institutions charged with managing the scheme and preventing price volatility.

Crucially, with control of both houses of Congress having fallen to the Democrats in November 2006, all the most powerful positions in the House of Representatives and the Senate are now controlled by supporters of climate change legislation. As a result, a serious climate change bill would attract the support of a majority of senators. Lieberman-Warner stands a strong chance of gaining approval. If the bill is passed by the Senate Environment Committee, it could be voted on by the Senate by late 2008. It is just about possible that such an act could be implemented in 2009.

Concerns about competitiveness concerns cannot be dismissed entirely, however. Even if the US does set ambitious emissions reductions targets, there is little chance of agreement of "global sectoral agreements" any time soon. In the absence of such global agreements, the EU will have to consider various measures to maintain a level playing field and prevent energy-intensive industries migrating to countries with less demanding environmental regulations. After all it would be counter productive to increase the energy costs for internationally exposed sectors such as steel and aluminium, if this led to EU producers relocating production to other continents rather than investing in reducing their emissions in the EU.⁷

5. United States Climate Action Group, 'A call for action', March 2007.

6. The Jeffords Boxer and Waxman bills are identical, the former before the House of Representatives and latter the Senate.

7. Carbon Trust, "The European Emissions trading scheme: implications for industrial competitiveness", 2004.

The Commission needs to clarify as soon as possible which industries will be granted concessions, rather than waiting, as it currently intends to, until 2010. Of the two proposals put forward by the Commission to prevent carbon leakage – handing out permits to these sectors for free and requiring importers to buy permits – the first would be preferable. This would not mean a free-ride for these industries. Allocating free permits to energy-intensive industries would not remove incentives for them to curb emissions so long as carbon prices are sufficiently strong to provide companies with incentives to reduce their emissions. Demanding that importers buy permits under the ETS or the imposition of border tax adjustments (BTAs)⁸ would be much more problematic. Although the objective would be to 'level the playing field' it would prompt accusations of protectionism from developing countries. They would no doubt argue that a proportion of their emissions reflect the decision of Western companies to shift production offshore, and that it would be unfair to punish them for this.

CONCLUSION

The EU's environmental targets are as ambitious as is feasible given political constraints. They will not create institutions that could serve as models for the kinds of global environmental institutions that are required. However, the setting of legally binding targets and the growing prospect of US actions means that the industrialised economies could soon have policies in place that will deliver substantive cuts in emissions. They will then be in a far strong position to demand action from fast developing economies such as China and India.

8. BTAs would compensate EU producers for the higher costs they incur as a result of carbon pricing and penalise companies importing goods into the EU from countries that refuse to put a price on carbon emissions.