CLIMATE CHANGE

Weak Carbon Prices Threaten the EU's Environmental Leadership

Simon Tilford Chief Economist, CER

The EU's Emissions Trading Scheme (EU ETS) works by capping the output of carbon dioxide and then distributing allowances to emit the gas to large energy users. The tighter the cap, the more expensive it is for firms to produce carbon dioxide. The European Commission is relying on carbon pricing to encourage companies to invest in new green technologies. It also hopes that the ETS will form the basis of a global carbon market. However, carbon prices under the scheme have fallen by two-thirds in just over six months. At December's UN conference in Copenhagen, the EU wanted to persuade big emerging economies such as China and India to take action to curb their own output of greenhouse gases. This was a tough task, given that Europe's flagship environmental policy is not working.

Firms will only invest in new technology if they are confident that carbon prices will be high enough to justify the cost. In early November 2009, the carbon price stood at €14 per tonne. Although this represents an improvement on the low of €10 reached in February 2009, prices are too low to make such investment worthwhile. Back in July 2008, the carbon price stood at €30, a sufficiently high level to provide a strong market signal. The current state of the carbon market poses a bigger risk to the future of the ETS than the previous collapse of carbon prices. Prices fell to just €1 in 2007 because too many allowances were distributed for the first phase of the ETS (from 2005 to 2007) and firms were not permitted to hold on to surplus permits for use in the subsequent phases (2008-12 and 2013-20). However, the price of carbon for use in phase two remained above €18 per tonne during 2007 (and hence well above current levels), because investors were confident that emissions caps in the latter phases would be tighter. In terms of encouraging investment, it is the future price that matters.

There are cyclical and structural reasons for the current weakness of carbon prices. The cyclical reason is the decline in Europe's industrial activity, and hence energy use, since the middle of 2008. With the supply of carbon allowances fixed and emissions declining, carbon prices have inevitably fallen. The EU economy was on course to shrink by around 4% in 2009. The release of carbon dioxide by industries covered by the carbon market could

decline by as much as 10%. Moreover, the economic recovery will be slow to gain momentum, with economic growth (and hence energy consumption) set to remain weak for several years. In short, the EU economy will not grow anywhere near as fast between 2008 and 2020 as was assumed when the emissions caps were set, and hence emissions will be considerably lower than forecast. Instead of expanding by around 2.5% per annum – as assumed by the European Commission – economic growth is more likely to be around 1.5%. The cumulative impact of this on emissions will be huge.

The ferocity of the economic downturn has also highlighted two structural weaknesses in Europe's carbon market. First, the EU fixed the supply of carbon allowances until 2020. This was done for good reasons. Investors needed to be convinced that the cap on emissions would be sufficiently tight to ensure consistently high carbon prices, and that the emissions caps would not be altered under pressure from governments. However, the lack of a mechanism to amend the emissions allocations in the light of changed economic circumstances threatens the efficacy of the scheme and its demonstration value internationally.

Second, the method of distributing the allowances is exacerbating the weakness of carbon prices. In phase two of the ETS (2008 to 2012), the vast majority of allowances is allocated for free. In phase three (2013 to 2020) energy generators will have to purchase them through auctions. But auctioning will only be introduced gradually for the other industries covered by the market. The upshot is that very few businesses are actually paying to emit carbon dioxide at present. And it has become apparent that emissions will remain weaker than projected for a number of years, they will be able to put off buying allowances until well into phase three. If all businesses had to pay to emit carbon dioxide now (or at least from 2013), prices would not be as weak as they are at present.

If EU emissions are falling, why does it matter if carbon prices are low? Surely the main thing is that the EU reduces emissions of greenhouse gases? The answer is that it matters why emissions are falling. At present, lower carbon dioxide emissions stem from temporary factors, not structural ones and that weak carbon prices will delay the necessary structural changes. A structural fall in emissions (one that will not be reversed once the economy recovers) requires investment in new technologies, such as carbon capture and storage (CCS) and renewable energies. But companies will only make such investments if they are confident carbon prices will recover.

Weak carbon prices also threaten to paralyse the Clean Development Mechanism (CDM). Under the CDM, European emitters can earn carbon allowances by investing in projects to cut emissions in developing countries. The rationale for this is two-fold: it is often cheaper to reduce greenhouse gases in poor countries than in rich ones, and it leads to the transfer of capital and technology to developing countries. The CDM represents an efficient way of meeting developing country demands that the developed world help finance their decarbonisation. In the process, it also developing countries a stake in an embryonic global

carbon market. Unfortunately, at their current levels carbon prices are too low for it to be worthwhile for firms to invest in CDM projects.

Carbon prices will need to rise quickly to preserve the credibility of the EU's ETS. Given the dire economic outlook, the Commission may have to intervene in the market to ensure this happens. One argument against intervention is essentially ideological: that it would interfere with the working of the market. Another argument is that intervention would create uncertainty: investors would come to fear that the Commission would interfere in the market whenever it was unhappy about the price the market was putting on the price of carbon. Both fears are exaggerated. The carbon market – like many others – is the product of regulation – so altering the frame of that regulation in light of changed circumstances should not be considered problematic.

What could the Commission do? It could, for example, tighten the post-2020 (phase four) emissions cap, which is not yet set in stone. Given that emitters can retain allowances from phases two and three (2008-12 and 2013-20) for use in phase four, reducing the number of allowances available in the post-2020 period would help to prevent further falls in prices now. But this alone will not be enough to ensure that prices rise rapidly. The Commission should also announce that from 2013 auctions will be subject to minimum prices of €25. Those allowances that do not meet the reserve price would then be withdrawn from the market. Such a move would increase carbon prices and reassure firms that prices will remain high enough to warrant investment in low-carbon technologies. Crucially, it would ensure that the EU has climate policies in place to match its rhetoric and help the EU to consolidate its leadership of the international environmental agenda.