

Risk of Low Carbon Price

According to Hugo Robinson of Open Europe,¹ linking Phase Two of ETS with Kyoto credits generated outside the EU, imports a level of price uncertainty that will be detrimental to the future low carbon investment in Europe.

Setting the scene

The first phase of the EU Emissions Trading Scheme has been widely judged a failure. More permits to pollute were printed than there was pollution and when the market discovered this, prices collapsed dramatically. The EU Commission has acknowledged these failings, but now takes the line that the first phase of the ETS was always going to be a 'learning by doing' phase.

Likely market balance in Phase Two

Unfortunately, the risks of low carbon prices are still very much present in Phase Two.

On the face of it, the National Allocation Plans (NAPs) for Phase Two look to have set a cap on carbon emissions tight enough to guarantee the scarcity in permits necessary for a firm carbon price. Over the five year trading period, the total cap for the EU-25² is about 1.3bn tonnes of CO₂ below projected emissions.

However, in the second phase of the ETS member states will be able to "import" external Kyoto "credits" from developing countries in order to meet their targets. These are generated from Clean Development Mechanism (CDM) and Joint Implementation (JI) projects designed to reduce emissions. There is in theory a limit on how many of these credits can be imported – but in practice this limit has been set so high that it is virtually meaningless – in fact, the limit is almost equivalent to the expected emissions shortfall.

Therefore, the potential supply of Kyoto credits will be a decisive driver of ETS prices for Phase Two. The key question is how many will be available in the market?

After surveying carbon market participants last year, the World Bank said that between 1bn and 1.2bn tonnes worth of credits would be available between 2008 and 2012, with the effect that "installations, using credits from CDM and JI, could be in a balanced position or a marginally short one."³ In a more recent analysis, Point Carbon predicted that all of the scarcity created in Phase Two could well be covered through imported credits, with total supply reaching 1.3bn.⁴

With a current pipeline of projects likely to yield a total of around 2bn tonnes worth of credits, much will depend on the demand from other major buyers of Kyoto credits: EU governments and Japan. EU government demand will account for about 400-500Mt, whilst Japanese demand will be around 700-800Mt – although this will depend on a variety of factors, including the effectiveness of other climate change policies adopted. However, in order to meet their obligations under the Kyoto protocol, Japan, Italy and other European countries have expressed interest in importing another form of credits from Russia and former Soviet bloc countries – Assigned Amount Units (AAUs). Under Kyoto, targets to cut emissions were set relative to 1990 levels but eastern

¹ Open Europe is an independent non-party political think tank based in London.

² Since reliable emissions data for Romania and Bulgaria is not currently available, these have not been included in our estimates – whilst these countries will exercise some influence on the overall balance of the ETS, it is not likely to radically alter our assumptions.

³ World Bank, *State and trends of the carbon market 2007*.

⁴ Roine, K. "CDM/JI supply: Will there be enough?," *Carbon Market Europe*, Point Carbon (1 June 2007)

European countries, including Russia, lost large amounts of industry following the collapse of the Soviet Union, so their emissions today are much lower than in 1990. This means they have large numbers of AAUs for sale. Taking into account the dilution in EU and Japanese government demand likely to result from this supply of AAUs, it is probable that analysts are correct in predicting that the ETS shortfall will be more or less covered through imported credits.

Indeed, the supply of AAUs (which has become known, rather notoriously, as ‘Russian hot air’) could prove to be a significant, and possibly negative, factor affecting emerging global carbon markets – to which the EU ETS is linked.

A recent study by the Japanese Ministry of Economy, Trade and Industry estimated that a potential supply of 8.3bn tonnes of AAUs would lead to an oversupply and price collapse in the Kyoto carbon markets. Prof. Catrinus Jepma of Amsterdam University, whilst estimating an influx of ‘only’ 2.7bn tonnes of Assigned Amount Units (AAUs), also concluded that the Kyoto carbon markets would be “characterised by a structural

over supply of credits.” (See Figure 1 below) Such a scenario would feed through into far lower prices in the linked ETS.

Figure 1 – Kyoto Credit Supply and Demand (Jepma 2007)

| | |
|-------------------------------|---------------|
| Projected supply | 5.75bn |
| CDM | 2.90bn |
| Jl | 0.15bn |
| AAUs (restricted sale) | 2.70bn |
| Projected demand | 3.50bn |
| Net surplus of credits | 2.25bn |

It is unlikely, however, that the former Soviet states will simply flood the market with all their excess AAUs. Moreover, many Western governments refuse to buy credits that simply mean filling the coffers of the Kremlin. In order to circumvent this issue, it is likely that many AAUs will be purchased on the condition that proceeds are earmarked for investment designed to curb emissions – through the Green Investment Scheme (GIS).

Both Russia and Ukraine are actively pursuing the GIS option, together with ‘fast-track’ Jl projects that generate credits through modest (and therefore ►



low cost) upgrades to ageing, inefficient industrial plants, with the potential to generate large volumes of cheap credits.

A great deal may depend on the extent to which Russia can persuade Ukraine and other smaller 'hot air' countries to fall into line in imposing cartel-like control on carbon supply, effectively organising a 'carbon OPEC'. If the Kremlin is unable to do this, the scenario of hot air oversupply, and very low ETS causing prices, becomes more likely.

Negotiations on the post-Kyoto framework will also be pivotal. If credits from the current phase can be used beyond 2013, this will encourage a rapid expansion in projects, and the numbers of credits available for use in Phase Two of the ETS. The post-2013 framework could also determine whether countries with AAUs choose to bank these credits for sale after the current Kyoto commitment period (2008-2013).

The overarching conclusion for the supply/demand balance of the ETS in Phase Two is one of very high uncertainty, created by a range of geopolitical and economic variables. Such uncertainty, in no small measure heightened by linking the ETS with the Kyoto markets, is clearly undesirable from a market perspective. This can only act as a deterrent to the kind of long term structural investment in a low carbon economy that a serious climate change policy ought to deliver.

How will the ETS interact with the EU's other energy policies?

The EU has recently announced massive new targets for mandatory renewable energy use by 2020 – 20% of total EU energy consumption by 2020. However, since electricity constitutes only a part of overall energy use and is a cheaper sector in which to realise expansion of renewables than transport or heating, the EU target will mean around 34% of

electricity having to be generated from renewables.

Such a large level of renewable incorporation in the power generation sector could have a major impact on carbon prices. In order to meet the EU targets, it is almost certain that large amounts of subsidy will continue to be required to spur investment in this form of generation. However, since this would reduce scarcity of carbon within the sectors subject to emissions trading, the price of carbon would also fall within the ETS.

Put simply, the EU ETS and renewables targets are mutually contradictory, and risk creating a 'waterbed' effect – reducing emissions in some areas, but leading to increases in other areas. UK officials, in leaked papers, issued a stark warning to the Government: "If the EU has a 20% GHG (greenhouse gas) target for 2020, the GHG emissions savings achieved through the renewables risk making the EU ETS redundant, and prices to collapse."

The influence of massive subsidy for electricity generation will be most noticeable in Phase Three of the ETS (2013 – 2020), but will undoubtedly be a factor in the later stages of Phase Two, adding further to the uncertainty described above. ▶



Will the ETS deliver for the environment?

As stated above, it is more than likely that the shortfall of allowances in Phase Two of the ETS will be covered by imported credits.

This might be acceptable if these credits reflected real emissions cuts – unfortunately, they have already been exposed as highly flawed, and often fraudulent. Projects which trap and destroy HFC-23, a potent greenhouse gas, are the best known example of these problems, with an accounting loophole being used to generate fat profits and massive economic distortions. Up to €5bn has been wasted on projects that should have cost no more than €100m.

Kyoto projects do not always reflect absolute reductions in emissions, whilst many of these credits are generated

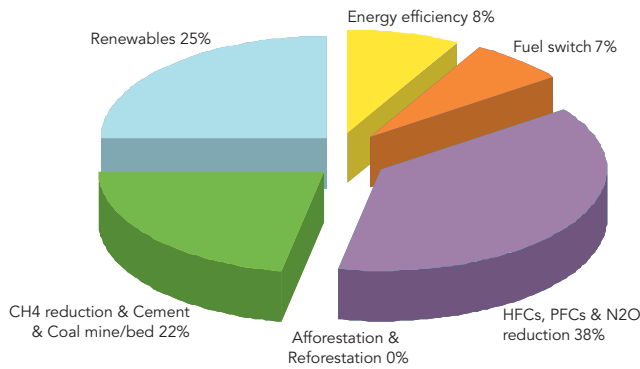
from projects in developing countries that would have happened anyway.

(See Figure 2 below) Issuance of such credits equates to a subsidy for increased pollution.

Furthermore, the promised development gains of the Kyoto mechanisms remain dubious. As **Figure 3 below** shows, most investment in these projects will be directed to China and India. Most of this will be absorbed for by large, highly capitalized firms (often those involved in HFC destruction). Sub-Saharan Africa will see a negligible share of investment.

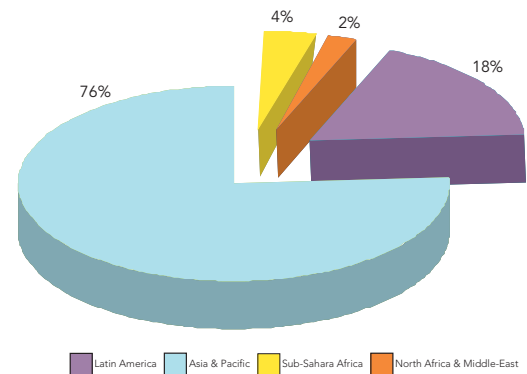
In conclusion, linking the ETS with the Kyoto markets seriously undermines the environmental integrity of the EU ETS, whilst importing a level of price uncertainty that will be detrimental to future low-carbon investment in Europe. ■

Figure 2 – Estimates 2012 Certified Emission Reductions (CERs)



Source: UNEP Risoe Centre (<http://cd4cdm.org/>)

Figure 3 – Distribution of CERs in the Pipeline



Source: UNEP Risoe Centre (<http://cd4cdm.org/>)