

## **THE EU EMISSIONS TRADING SCHEME, CARBON PRICING AND INTERNATIONAL ASPECTS OF EU CLIMATE CHANGE POLICY: SOME COMMON MISCONCEPTIONS**

### **Background**

The EU Emissions Trading Scheme (ETS) was designed to deliver a given level of emissions reduction at the lowest economic cost. Its principal design features are outlined in the Annex.

A number of green lobbyists, and some politicians, have been arguing that the recession has:

- on the one hand made the achievement of Europe's long term emissions reduction goals more difficult; and/or
- reduced the economic cost of achieving Europe's current 2020 target, and that this target can therefore be unilaterally tightened.

This briefing document addresses some of the false assumptions and misconceptions that underpin these claims.

### **The recession**

The recession hit the UK and European steel industry badly. At its depth, steel output was running at half normal levels. Plants were mothballed, employees laid off and made redundant, and severe losses threatened the financial future of many steel companies. Many companies are still not yet back to full production. UK steel output in the first half of 2010 was still 30% below the same period in 2008.

As a result, steel industry emissions also fell, and companies in the ETS found themselves with more allowances on their hands than they needed. Some companies have sold these allowances; others are banking them for future needs. To suggest however that steel producers are profiting from this at the expense of the environment is an insult to the hardships suffered by the sector's employees and managers during this period. Income received from the sale of allowances has been minuscule compared with the scale of losses incurred.

### **Steel: essential to economic development and to combating climate change**

Global steel demand continues to rise. In the six years prior to the recession world demand grew by 8% a year; and this year demand is forecast to rise by 11%. Steel is needed to help build the economies of developing countries. Today, much of that demand is met by developing countries themselves, such as China and India.



Steel continues to underpin European manufacturing, supplying high quality products to meet increasingly demanding needs. In the context of climate change, all the new technologies that Europe is seeking to invest in – wind, wave and tidal power, nuclear power, carbon capture and storage etc – are steel intensive.

There can be no doubt therefore that steel will continue to be consumed in large quantities in Europe and the rest of the world. Our concern is to ensure that the steel we consume here is made here. If European climate change policies impose disproportionately higher costs on local manufacturers, it will be Russian, Chinese and Brazilian steel companies that make the steel needed to decarbonise our economy – not ours.

In the context of the ETS, this danger has already been recognised, with study after study identifying steel as the sector perhaps most at risk from carbon leakage.

**“The carbon price is too low and threatens investment in low carbon technologies”**

It has been claimed that the carbon price is currently too low to encourage investment in new nuclear and other low carbon electricity generation capacity. In other words, that at today’s carbon price, gas and unabated coal generation remain cheaper options. There have consequently been calls for price interventions in the carbon market, by for example imposing a floor price or by setting auction reserve prices<sup>1</sup>. Such interventions would however fundamentally undermine the economic rationale of the ETS. They would ensure that the cap was being delivered at a higher than necessary price, thereby risking unnecessary damage to the EU economy.

It must also be recalled that the EU ETS covers a wider range of sectors than just power generation: sectors moreover that differ from power generation by being subject to international competition. Carbon market price interventions would impact indiscriminately on all these sectors.

To repeat: the cap will be delivered; the environmental outcome set by the Commission will be achieved. Trading in emissions is designed to deliver this objective at the lowest economic cost to society. A low but stable carbon price should therefore be perceived as a successful outcome.

Having said that, today’s carbon price has been influenced by the recession. It cannot be taken as an indication of future carbon price levels in Phase 3 and beyond, as carbon becomes shorter in supply, at a time when a new nuclear fleet might start to come on stream.

Nevertheless, we recognise that investment in new nuclear generating capacity is vital to the UK’s future energy security, and that a strong and predictable carbon price signal is important if companies are to make the

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<sup>1</sup> Any such intervention would have to be at EU level – so this is not a matter for the UK government alone.

substantial capital expenditures required<sup>2</sup>. Artificially manipulating the EU ETS carbon price is however the wrong way of achieving this.

We have therefore found the coalition government's proposals to transform the climate change levy into a genuine carbon tax, and to levy additional levels of taxation from electricity generators should the ETS carbon price drop below a given level, to be an interesting proposal, which could help deliver the predictability required for nuclear investment. Two essential pre-conditions however must be that:

- Climate change agreements are retained and remodelled to ensure that energy intensive industries in the UK retain their European and international competitiveness.
- It must be recognised that the stronger price signal will not actually be needed until new nuclear generating capacity comes on stream. The only requirement needed today to encourage the required investment is the certainty that a higher carbon price signal will be in place in the future.

**“Companies have made windfall profits from selling excess allowances”**

As previously stated, manufacturing output was severely impacted by the recession. In the case of steel for example, UK production in 2009 was 27% below 2008 levels. This in turn inevitably resulted in lower emissions, with the result that allowances issued to these sectors – which were based on assumptions of business as usual – have exceeded their needs<sup>3</sup>.

There have accordingly been accusations of companies making “windfall profits” from selling excess allowances, leading to calls for the cap to be tightened<sup>4</sup>.

In the run-up to the decision on Phase 3, the steel industry argued long and hard for a fundamental change to the way the ETS operated for sectors subject to international competition. Our proposal was that allowances should (as will in fact happen in Phase 3) be based on demanding performance benchmarks; but instead of being subject to an absolute cap, they should be adjusted *ex post* in the light of actual output levels. Thus it would be the

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<sup>2</sup> A strong carbon price signal is less of an issue for renewable energy, which is incentivised by significant, consumer-funded subsidies, not available to nuclear operators.

<sup>3</sup> It is notable that, despite the severe drop in manufacturing output and energy demand, the price of carbon has not fallen to zero as it nearly did in Phase 1, and has been remarkably stable. This suggests that the market expects the supply of allowances to become tight again in the medium term.

<sup>4</sup> Earlier this year, a subsidiary issue was the claims that Corus' decision to mothball part of its Teesside plant was influenced by the allowances that would then be available for sale. Corus has made it clear that these claims are utterly without foundation. The costs of the mothballing greatly exceeded any proceeds from the sale of unneeded allowances; beyond 2010, the level of allowances allocated to Teesside (in respect of its continuing operations) will be a matter for the Regulator; and if the Teesside plant is to be re-opened, or sold to another operator, the allowances will again be needed. Indeed, it is possible that the shortfall of allowances that will occur from 2013 onwards could act as an impediment to any such sale.

relative carbon efficiency of each plant that would dictate its allowance. Companies would not benefit from reducing output, but nor would they be penalised for increasing output.

Both legislators and green lobbyists soundly rejected this concept. They wanted the certainty of an absolute cap. Yet if our proposal had been accepted, the total volume of allowances would have been flexed in proportion to industrial output, there could have been no accusations of “windfall profits” and the carbon price would probably have remained firm.

We would welcome a review of the ETS leading to full *ex post* adjustment. What we reject however is the current suggestion of a one-way adjustment only, reducing allowances when output falls, but not increasing them when output rises. A hybrid system would simply result in higher costs for industry.

As previously stated, in the current and future phases of the ETS, the pre-determined environmental outcome will be achieved, irrespective of the state of the economy. The objective should be that it is achieved at the lowest possible cost for manufacturing.

**“The excess of allowances currently in the system weakens its environmental effectiveness”**

This is patently absurd. The environmental effectiveness of the ETS is guaranteed, as the cap cannot be exceeded.

One concern expressed by green lobbyists appears to be that Europe will have achieved its Kyoto targets too easily. We can not understand the logic of this. The lower the cost to Europe of achieving decarbonisation, the greater the economic benefit.

Another, more understandable, concern is that the build up of “surplus” allowances, which can be banked and carried over into phase 3, means that for several years to come there will be little incentive for manufacturers to improve their carbon efficiency. This however misses two important points:

- Steelmaking technology today has reached the limit at which further emissions reductions can be achieved. Breakthrough technologies are needed<sup>5</sup>. While some companies do undoubtedly still have some scope to improve their carbon efficiency, many others do not. These companies can only reduce emissions by reducing output – i.e. by provoking carbon leakage.
- The build up of “surpluses” does not mean that the EU will emit more. It simply staves off the day when the cap starts biting into the flesh of Europe’s manufacturing base, and steel companies are forced either to

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<sup>5</sup> A consortium of EU steel companies and research institutions have set up the ULCOS project to develop a breakthrough technology for ironmaking. The aim is to deliver a 50% reduction in emissions by 2050. Phase 1, which cost €60 million, identified four technologies (from a total of 80 theoretical technologies examined) as meriting further research. We are now in the early stage of Phase 2, involving the development of demonstration plants.

buy allowances (and make themselves uncompetitive) or to reduce output.

**“As the 20% 2020 emissions reduction target can now be more easily achieved, the EU should unilaterally raise its target to 30%”**

In line with existing EU policy, Europe should only increase its target if it is an integral part of an international agreement in which all of our major trading partners shoulder equivalent carbon constraints.

It would be totally counter-productive for the EU unilaterally to increase its target. It is naïve to assert that if Europe leads the way with such a unilateral offer then others will follow. This is not how international negotiations work, and as Copenhagen amply demonstrated, most other countries view the climate change negotiations as no different from other negotiations.

Furthermore, the fact that the recession has temporarily resulted in lower emissions does not mean that a 30% target will necessarily be easier to achieve. It has to be assumed that European economies will have emerged from recession long before 2020, and that emissions will consequently return to pre-recession levels. Put another way, the recession has resulted in a reduction in the cumulative emissions over the course of the current phase. It does not however mean that a 20% reduction in emissions in the year 2020 will be any easier to achieve.

**“A tougher EU target is needed to stimulate green investment”**

The argument has been made that Europe is lagging behind China, the USA and Japan in the development of low carbon technologies, and that therefore Europe needs to move to a 30% target in order to stimulate this development. There are three things wrong with this argument.

Its proponents apparently fail to make the distinction between research and development into low carbon technologies and investment in their manufacture on the one hand, and installation of those technologies once they have been developed on the other hand. It is unclear what the economic link is between a tighter cap and increased R&D. How exactly would a 30% target stimulate increased private sector investment?

The evidence, such as it is, suggests the opposite. Two of the countries cited as running ahead of Europe in the development of low carbon technologies – China and the USA - have no binding targets whatsoever. Even Japan’s Kyoto target is lower than the EU’s. China and the USA have clearly not invested in the development of new technologies as a response to emissions reduction targets. There must be other drivers at play.

A tighter target could however stimulate investment in the installation of low carbon technologies. There is a clear link between a higher carbon price and investment in reducing emissions; and if a move to a 30% target resulted in a reduction in the ETS cap, this in turn would raise the ETS carbon price. However:

- In the case of technologies with long investment horizons, such as nuclear power, tidal power and carbon capture and storage, the higher carbon price is only needed once the facilities have started generating. What is needed is a clear commitment regarding future carbon prices, not higher prices today.
- More importantly, raising the target will increase manufacturers' costs, by pushing up energy prices and, in the case of ETS sectors, increasing the cost of buying allowances. This will reduce the funds available for investment and worsen the EU's international manufacturing competitiveness. It would actually make it more likely that the new technologies are developed outside of Europe.

Thus, to the extent that raising the cap stimulated the installation of green technology, it would also stimulate the economies of competing countries.

**“The Clean Development Mechanism undermines the effectiveness of the ETS”**

It has been reported that a number of steel companies have been buying CERs for ETS compliance and then selling for a higher price or banking for future use the EU emissions allowances (EUAs) thus saved.

CERs are obtained when a European company helps fund an emissions reduction project in a developing country under the Clean Development Mechanism. They can be used for ETS compliance as an alternative to EUAs, and trade at a discount.

One claim is that this had enabled EU steel companies to make windfall profits by selling EUAs that were originally allocated free of charge. However, the procedure is totally legal, and the profit made is only the difference between the CER and EUA price. The CDM was designed as a mechanism to encourage companies in the developed world to help finance decarbonisation in the developing world. This price differential is necessary for the CDM to work.

Another claim is that bringing large quantities of CERs into the ETS weakens it by in effect raising the cap. This argument completely ignores the fact that global warming is a global problem. The environmental objective is to reduce global emissions, not emissions from any particular region. The CDM helps achieve the global objective – by reducing emissions in developing countries – at a lower economic cost to Europe and should therefore be welcomed, not vilified.

We recognise that not all CDM projects in the past have been of the highest quality. We support the objective of tightening the compliance procedures to ensure that CDM projects deliver genuine additionality, i.e. that they result in lower emissions than would otherwise have been the case.

A subsidiary complaint has been that some European steel companies have been buying CERs from Chinese and Indian steel investments and that they have therefore been subsidising their competitors. However, if the

additionality test is met, there can be no such subsidy: the EU company is helping an overseas competitor invest in an emissions reduction project that would not otherwise have taken place because it would not have been cost-effective without the CDM finance. As far as the overseas company is concerned it should be cost-neutral, and does not confer a competitive advantage. It therefore cannot be a subsidy.

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## Principal design features of the EU Emissions Trading Scheme

The basic concept is that electricity generators and certain energy-intensive manufacturing sectors are required to submit to the regulators an allowance (or permit) for each tonne of CO<sub>2</sub> that they emit. The total EU volume of these allowances is capped. In Phase 1 (2005 – 2007) allowances were issued free of charge by governments, based on companies' historical emissions levels. In Phase 2 (2008 – 2012), electricity generators are required to purchase some of their allowances from government-organised auctions, whereas industrial companies continue to be given a free allocation (subject to some tightening of targets) in recognition of the risk of damage to their competitiveness. In Phase 3 (2013 – 2020), the default position is that all allowances will be auctioned, except that manufacturing, and in particular sectors demonstrated to be at risk of losing international competitiveness, will continue to receive at least part of their allowances as free issue<sup>6</sup>.

The size of the cap is being consistently tightened. Companies who find themselves short of allowances buy from others who have surplus allowances.

Putting aside Phase 1, which was only ever intended to test the working of the system, the caps are set at levels that are consistent with the EU's overall emissions reduction targets. In particular, the Phase 3 cap has been calculated by the Commission to ensure that the sectors covered by the scheme deliver the emissions reductions needed for the EU to achieve its current commitment for an overall reduction in emissions of 20% below 1990 levels by 2020. Should the EU decide that the commitments made by other nations under the Copenhagen Accord are sufficiently robust to enable it to move to its aspirational higher target of 30%, it is possible that the EU ETS Phase 3 cap will be reduced accordingly.

The EU ETS will thus deliver with complete certainty a pre-determined environmental outcome.

The economic theory is that companies will prioritise investments that deliver emissions abatement at marginal costs that are below the EU ETS carbon price. If the marginal abatement cost is higher than the carbon price, then it is more cost effective simply to buy the required allowances. (Reducing output is another abatement option.) As carbon allowances become scarcer and the price of carbon rises, more expensive investments become viable.

Thus, as the achievement of the cap is a given, it is evident that a relatively low carbon price means that the scheme has been successful in delivering cost effective abatement.

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<sup>6</sup> In Phase 3, the volume of free allowances issued to companies will be based on performance benchmarks derived from the top 10% performing plants in each sector.