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SAVING EMISSIONS TRADING FROM IRRELEVANCE

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SUMMARY

Uncontrolled climate change is the greatest risk that humanity faces. The main burden will fall on developing countries, particularly in sub-Saharan Africa. But Europe and its residents will also be damaged in many ways, including extreme weather, heat waves, and the spread of tropical diseases.

Climate change is a quintessentially global challenge. If pollution shifts from one part of the world to another – from Europe to China, for example – the global climate is no better off.

The main EU climate policy, the Emissions Trading System, now stipulates such a low carbon price that it has become essentially irrelevant. The European Commission should propose a Europe-wide carbon price floor of €30 per tonne, high enough to influence investment decisions and encourage energy efficiency and low-carbon energy supply. The Commission should also propose border tax adjustments, with the revenue returned to the country of origin.

This Policy Paper is part of a series entitled "EU resource management: what European external action strategy?" which also includes contributions by Annika Ahtonen (EPC) and Andrea Frontini (EPC), Sami Andoura (*Notre Europe – Jacques Delors Institute*) and Clémentine d'Oultremont (Egmont), Gonzalo Escribano (Real Instituto Elcano) and Nadège Chambon (*Notre Europe – Jacques Delors Intitute*).

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Carnegie Europe, CCEIA, CER, CEPS, demosEUROPA, ECFR, EGMONT, EPC, Real Instituto Elcano, Eliamep, Europeum, FRIDE, IAI, Notre Europe – Jacques Delors Institute, SIEPS, SWP.

Four other series of Policy Papers deal with key challenges on defence, EU neighbourhood, migrations and economic policy. The final report presenting the key recommendations of the think tanks will be published in March 2013, under the direction of Elvire Fabry (*Notre Europe – Jacques Delors Institute*, Paris).

Introduction

The Durban Climate Change Conference set a timetable for agreeing new targets on greenhouse gas reductions. This was better than nothing – but not much. There is little prospect for significant global agreement on climate change. So the EU should focus on its internal climate policy.

Uncontrolled climate change is the greatest risk that humanity faces. A report commissioned by 20 governments and published in September 2012 estimates that it is already killing nearly 400,000 people each year. In addition to the direct human cost, there is a high economic cost. The report calculates that climate change is already costing the global economy €930 billion each year.[1] These figures will get worse no matter what is done from now on, but without rapid reductions in greenhouse gas emissions, they will spiral out of control. The main burden will fall on developing countries, particularly in sub-Saharan Africa. But Europe and its residents will also be damaged in many ways, including extreme weather, heat waves, and the spread of tropical diseases.

> "THE ECONOMIC SITUATION IN EUROPE HAS REDUCED THE ATTENTION AND PRIORITY GIVEN TO CLIMATE CHANGE"

The economic situation in Europe has reduced the attention and priority given to climate change. But insufficient attention to climate policy exacerbates economic risks. Using energy more efficiently will deliver immediate economic advantages, by creating employment through retrofitting programmes, for example. Expanding renewable energy will deliver economic advantages in the mid- and longer term. Well designed climate policies could contribute to EU economic recovery by increasing investment in energy efficiency and low-carbon energy.

Climate change is a quintessentially global challenge. If pollution shifts from one part of the world to another – from Europe to China, for example – the global climate is no better off.

1. Emissions trading

European climate policy has focused on the Emissions Trading System (ETS). The ETS was established in 2005 to reduce greenhouse gas emissions to a certain level and to provide a price signal that would lead to increased investment in energy efficiency and low-carbon energy. A further informal objective is to raise revenue for governments.

The ETS aims to control emissions from both power generation, district heating (above a certain size) and a number of energy intensive industries. When it was set up in 2005, the ETS was the world's first international emissions trading scheme. As such, phase I (2005-07) was explicitly a learning phase. Allowances were given to companies for free ('grandfathered') rather than being auctioned. In late 2005 and early 2006, the price of allowances was over €30 per tonne. This price was high enough to make companies act to reduce emissions (though also high enough to raise legitimate concerns about windfall profits). But too many allowances had been allocated by Member State governments, so large surpluses of allowances accumulated, predominantly in the iron, steel and cement sectors. Once the extent of the surpluses became widely known, the carbon price declined to almost zero.

Aware of the over-allocation that occurred in phase I, the Commission rejected many of the plans submitted by Member States for phase II (2008-12). Thus there was a tighter emissions cap Europe-wide. In 2008 carbon allowances were trading at above €20 per tonne, reaching a peak of over €30 per tonne in July 2008. However, despite the efforts of the Commission, over-allocation still occurred in phase II.

1. DARA group and Climate Vulnerable Forum, "Climate Vulnerability Monitor: A Guide to the Cold Calculus of A Hot Planet", September 2012.

Due to the continuing problem of Member States over-allocating allowances, the Commission proposed that in phase III (2013-20), it should set a single, Europe-wide cap. This was agreed in a revised 'ETS directive' in 2009. The ETS cap was set so that emissions from ETS sectors would be 21% lower in 2020 than in 2005. The cap will decline 1.74% every year between 2013 and 2020, and this trajectory will continue each year after 2020, unless altered by an EU decision.

In order to end windfall profits for utilities, increase the financial signal represented by allowances, and increase revenue for governments, the 2009 directive also requires that allowances be auctioned to many sectors in phase III, including the power sector, which accounts for over half the total emissions covered by the ETS. (Member States were permitted to auction allowances in phase I – up to 5% – and phase II – up to 10% – but this approach has not been widely used.) In the EU-15, all allowances for some sectors, including the power sector, will be auctioned. EU-12 countries are permitted to continue giving free allowances, though the free allocations must be phased out during phase III.

However, the Commission failed to anticipate the scale of the economic recession (as, to be fair, most others did too). The 2013-2020 ETS cap was set against anticipated 'business as usual'. But business at present is anything but usual. This has resulted in the ETS cap once again being set too high, and demand for allowances being low. Once this became widely understood, prices collapsed again. At the time of writing it is around €7 per tonne.

To what extent has the ETS delivered its objectives? The desired greenhouse gas reduction has been achieved. But the ETS contributed little to this achievement. The recession has been a major cause, and other EU policies, including the 'eco-design directive', fuel efficiency targets for vehicles and the promotion of renewables, have had a greater impact on emissions than has the ETS. The ETS has also had little impact on investment decisions.

> "THE ETS NEEDS HIGHER CARBON PRICES AND GREATER PRICE STABILITY AND PREDICTABILITY"

If it is to deliver greater investment in energy efficiency and low-carbon energy, the ETS needs both a much higher carbon price and much greater price stability and predictability. Greater price stability would mean that this capital would be available at lower cost, because of reduced risk. But a low ETS price will not incentivise low carbon investment, even if it is entirely stable and predictable. To achieve this objective, a price considerably above €7 per tonne is required. The minimum allowance price that would deliver low carbon investment is unclear, since it depends in part on the prices of the alternative, high-carbon fossil fuels, which are uncertain and unstable. But the €30 per tonne price of mid-2008 was said by many companies and investors to be high enough to influence behaviour significantly.

Options for strengthening the ETS can be divided into two categories: those which lower the quantity of allowances and those which directly address the price. Quantity mechanisms might increase the carbon price – or at least prevent further decline – but would not deliver greater stability. Price mechanisms could deliver both a higher price and much greater stability.[2]

2. Quantity and price mechanisms

Were the 2020 greenhouse gas reduction target to be tightened, the ETS cap would have to be lowered to contribute to meeting the target. A 2030 greenhouse gas reduction target – which the Commission is considering – would also require a lower ETS cap than the one already set under the annual reduction trajectory of 1.74%, which remains in force beyond 2020 unless altered by the EU institutions.

2. Michael Grubb, "Strengthening the EU ETS", *Climate Strategies*, March 2012.

The EU could also tighten the ETS cap without increasing its 2020 greenhouse gas target. The cap could be tightened through a one-off reduction in the total amount of allowances, or an increase in the trajectory of annual reduction in allowance numbers, or both.

A tighter cap would, depending on how tight it was, either increase the price of allowances or stop further reductions. However, Europe's economic situation is so uncertain that a cap, however tight, would not introduce price predictability into the system.

Instead of lowering the cap, the EU could withdraw a number of allowances from the market. This could be linked to a specific policy, to reflect the impact of that policy on the carbon market. For example, a specific number of allowances could be withdrawn to reflect the agreement of the Energy Efficiency Directive: greater energy efficiency will mean that there are lower emissions, so without any set aside of allowances there would be a further fall in the carbon price.

If sufficient allowances were set aside, the ETS cap would effectively be lowered. This could prevent further price reductions but would not likely increase prices significantly. Nor would "set aside" increase the predictability and stability of the ETS. It could in fact make the system more unstable: market participants could legitimately say that as institutions had intervened in the market once, they might well choose to do so again.

However, set aside is the approach that has the best chance of being agreed quickly. The ETS is in urgent need of support if it is to avoid total irrelevance. So set aside is a necessary step to take. But it is far from sufficient.

European institutions could agree that no allowances would be sold at auction unless a bid above a certain level was received. This Europe-wide price floor would be the best way to provide price stability in the ETS. The price floor would not be setting a fixed price for allowances, so would not be turning the ETS into a tax. (A European carbon tax has much to be said for it, but runs straight into subsidiarity objections about 'European taxes', as Jacques Delors found when he proposed one.) The price floor would set a *reserve* price and provide a backstop to the carbon market.

3. Carbon leakage

A higher ETS price would need to be accompanied by measures to safeguard energy-intensive, highly traded sectors. Without safeguards, a stronger ETS would lead to greater import of products like chemicals, cement and aluminium from countries with cheaper energy costs, such as China and India. This further shift in global manufacturing would do nothing to protect the global climate. Indeed it could worsen the impact of the manufacturing on the climate, since coal provides over 60% of China's energy and over 40% of India's. China has the world's third largest coal reserves, and India the fourth largest. In the EU, less than 20% of energy comes from coal.

The world's largest coal reserves are in the United States. The US gets around a quarter of its energy from coal. The fuel that is increasingly used in the US is not coal, however, but gas – much of it unconventional shale gas. Burning gas results in lower carbon emissions than burning coal does. But gas is not a low-carbon fuel. It produces around four times as much carbon dioxide per unit of electricity as nuclear power or coal (or gas) with carbon capture and storage, and around sixteen times as much as wind does.[3] The extensive use of shale gas has reduced energy costs in the US. So, unless energy-intensive, highly traded sectors are safeguarded, a stronger ETS would lead to a shift of manufacturing from Europe to the US.

3. UK Energy Research Centre, "Response to the Treasury consultation on carbon capture and storage", London, 2006.

Not much of this so-called 'carbon leakage' has occurred so far. But that is because the ETS has not yet been effective and has not delivered a high carbon price. A high European carbon price could lead to substantial carbon leakage.

In its 2008 proposals for the reform of the ETS directive, the Commission suggested two possible approaches to protecting industrial sectors at risk from carbon leakage. One was to prolong the free allocation of permits to such sectors. The second was to introduce border tax adjustments so that importers were required to make payments when their goods were imported into the EU, to reflect the goods' carbon content. Following negotiations with Member State governments, border tax adjustments were dropped in favour of free allocations.

> "TO REFLECT A GOOD'S CARBON CONTENT A BORDER TAX ADJUSTMENT COULD BE INTRODUCED"

Since the inclusion of aviation in the ETS in January 2012, all airlines using European airports are required to hold ETS allowances to cover all emissions from all flights which use a European airport, including the portion of that flight that is not in European airspace. Commission officials have said on many public platforms that this is a de facto border tax adjustment. Non-EU governments have threatened to take the EU to the World Trade Organisation (WTO) over this issue, but the Commission's legal advice is that its inclusion of aviation in the ETS is not discriminatory and is WTO-compliant.

Calculating the emissions from aviation, however, is much simpler than calculating carbon emissions embodied in a manufactured product. This is not conceptually impossible: the charge for a tonne of cement manufactured in China, for example, could be calculated according to the average amount of energy used to make a tonne of cement in a Chinese factory combined with the average amount of emissions from that quantity of energy given the existing Chinese fuel mix.

Giving free allowances to sectors at risk from carbon leakage is preferable to simply allowing these sectors to become hopelessly uncompetitive and to move out of Europe. But this approach removes the incentive for energy-intensive industries to implement decarbonisation strategies such as carbon capture and storage. Nor does it encourage non-European economies such as China or the USA to develop cleaner energy sources and reduce their emissions. The Commission should therefore return to full consideration of border tax adjustments.

The revenue from border tax adjustments should be returned to the country of the product's origin, to be spent on energy efficiency programmes or investment in low-carbon energy. Developing countries already get revenue from the ETS: European companies are permitted to give money to the UN Clean Development Mechanism in order to 'offset' emissions for which they do not have allowances. This money has to be spent on programmes which reduce emissions or help the developing country adapt to the unavoidable consequences of climate change. Revenue from border tax adjustments would – if combined with a carbon price floor – be substantially greater than revenue from Clean Development Mechanism money. But the Clean Development Mechanism does provide a model for how border tax adjustments could be implemented and revenue returned to countries outside Europe, thus reducing the risk of trade wars.

Conclusion

There is no single measure which could be implemented quickly enough to strengthen the ETS. A combination of measures is needed. A substantial set aside of allowances would prevent the price from collapsing totally. A Europe-wide price floor would provide the long-term market the certainty needed to attract investment at reasonable capital cost. A sensible way forward would therefore be for substantial allowances to be set aside as soon as possible, and for the Commission to propose a price floor, price ceiling and border tax adjustments.

A price floor would not be setting a fixed price for allowances, so would not be turning the ETS into a tax. They would be setting a *reserve* price and providing a backstop to supporting a viable liquid market. This would then support long-term investment in innovation and infrastructure. It would also provide a lower bound to auction revenue, which reduces income volatility for national governments.

The three European institutions should agree to include the setting aside of allowances. The Commission should propose a Europe-wide price floor of €30 per tonne, and border tax adjustments with the revenue returned to the country of origin. The Commission should make these proposals as soon as possible, so that the process of making the ETS a credible climate policy is not further delayed.

Once it has improved its internal climate policy and demonstrated that there are economic as well as climate advantages, the EU could then refocus on international negotiations.

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