

ALDERSGATE GROUP

TRADING FOR GROWTH The role of the EU ETS in cutting emissions and stimulating wealth creation

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Foreword

The EU Emissions Trading Scheme (ETS) is undoubtedly the single most important policy instrument for the reduction of greenhouse gas emissions in Europe, if not the world.

A carbon trading scheme of such sheer size and complexity is unprecedented. If it drives the substantial emission reductions that governments predict, it could become the cornerstone for a worldwide trading scheme. Furthermore, its core design features would become universal. There is perhaps more riding on its success than any other policy instrument to combat climate change.

To date, there have been undoubted successes. Importantly, the trading system is working on a practical level. This innovative and highly sophisticated system has become fully functional, in a relatively short space of time.

As well as analysing what has gone right, we need to question what can be done better? How can the key design features be improved to ensure the optimum distribution of emissions and efficiency of resources, spurring growth and employment? How can we ensure a credible and stable long-term carbon price for investors and business?

This briefing by the Aldersgate Group looks at how the EU Emissions Trading Scheme can best deliver the necessary cuts in carbon emissions and maximise the economic benefits that can flow from higher environmental standards. By analysing key policy decisions such as the setting of caps, the distribution of allowances and the role of off-setting, this proposal builds on what has been achieved to date, so that the EU ETS delivers on the high objectives it has been set.

A properly designed carbon-trading scheme, that delivers adequate cuts in emissions cost-effectively, and stimulates economic activity, is a desirable outcome for society, and is of vital importance for the transition to a low carbon economy. It could also become a centre piece for the Aldersgate Group's core philosophy, demonstrating that high environmental standards stimulate wealth creation and jobs, and are essential for our long-term prosperity.



Adrian Wilkes
Chairman, Aldersgate Group

Summary

This Aldersgate Group analysis of the EU ETS considers how to harness its potential to drive resource efficiency and contribute to economic growth. The EU ETS is not only crucial for the environment, but also a policy where effective regulation makes a difference to the economy. Strong regulation of the EU ETS can manage the incentives facing participants so that protection from gamesmanship, future benefits from more efficient resource use, increased competitiveness, fair distribution of burdens and a stable path to a low-carbon economy, are all maximised.

The management of the EU ETS should send long-term signals to the economy that an optimal distribution of emissions allowances will both improve the environmental effectiveness of the scheme and the extent to which emissions trading can stimulate innovation, investment and employment. This will support economic success in the EU and deliver the required long-term cuts in emissions cost-effectively. In doing so, it will produce a beneficial outcome for society in economic and environmental terms.

The Aldersgate Group believes that key features of an optimal emissions trading scheme are:

- 1 A strong policy with a carefully regulated cap on carbon that drives the required reductions¹ in emissions as efficiently as possible
- 2 Emissions allowances should be distributed through both auctioning and free allocation:
 - Allocations can be varied within the economy to target cost-effective abatement opportunities, and mitigate competitive pressure from outside the EU
 - Auctioning forces earlier revelation of allowance needs, helping shape an appropriate emissions cap and strengthening the incentive for emitters to innovate to reduce emissions
 - In practice this means a far greater use of auctioning than at present
- 3 A tight emissions cap and careful regulation to ensure that off-setting:
 - Does not become the dominant emissions-reduction approach in the EU, so that incentives remain for resource efficiency measures within the EU economy, and
 - Provides genuinely additional emissions reductions

¹ The necessary level of emissions reductions is a scientific question that is not addressed further here.

Introduction

The Aldersgate Group is a broad coalition of environmental agencies, NGOs, think tanks and industry representatives who believe that high environmental standards will be a major part of future economic growth and international competitiveness. The Group's first report 'Green Foundations' set out its core argument: that high environmental standards are essential to the UK's long-term economic success and a high quality of life; and strong environmental policies present new business and employment opportunities, across the economy.

The management of carbon emissions is the most pressing environmental problem facing the global economy, and affects all economic activity. It is also a key test for the success of the Aldersgate Group's analysis – will policy makers only see a trade-off between regulating for carbon reductions on the one hand, and maintaining economic growth and stimulating wealth creation on the other? Or can these objectives be seen as complementary, creating successful long term climate and economic policies?

Earlier this year, the Aldersgate Group published 'Carbon Costs'², arguing that the lack of a standardised carbon accounting system across the economy is impeding the UK Government's long term goals of reducing emissions and creating a low carbon economy. This briefing looks at how the EU Emissions Trading Scheme can best deliver the necessary cuts in carbon emissions and maximise the economic benefits that can flow from higher environmental standards.

The Role of the EU Emissions Trading Scheme

UK and EU Governments have placed heavy reliance on carbon trading schemes to deliver on climate change targets. The EU ETS is intended to tackle emissions of carbon dioxide and other greenhouse gases across Europe. The first phase runs from 2005–2007 and the second phase will run from 2008–2012 to coincide with the first Kyoto Commitment Period. Further phases, of five-years or more, are expected.

The EU scheme works on a 'Cap and Trade' basis. EU Member State Governments are currently required to set a cap on the total emissions from all installations covered by the scheme. Each installation has then been given, or in a minority of cases has been sold, emissions allowances for the particular period in question. The distribution of allowances to each installation for any given period, (the number of tradable allowances each installation will receive), are set down in Member States National Allocation Plans (NAPs). The NAPs must be approved by the European Commission.

This is a critical time for the EU ETS, with Phase II only a few months away from being finalised, aviation set to join toward the end of Phase II, and the debates over Phase III underway. The decisions taken will be vital in determining whether emissions trading will deliver the level of cuts required and the boost for innovation, productivity and jobs that the transition to a low-carbon economy offers³. Key policy and regulation decisions concern the level of the cap, the distribution of allowances, and the role and form of off-setting.

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[www.aldersgategroup.org.uk/
reports](http://www.aldersgategroup.org.uk/reports)

3
*Environmental Innovation and
Employment, Elements of Euro-
pean Industrial Policy (Federal
Ministry of for the Environ-
ment, Nature Conservation,
and Nuclear Safety) June 2007.*

1 Capping Emissions

Fundamental to an environmentally and economically effective trading scheme is the overall cap on emissions. The acid test for the cap will be whether a stable and significant market price for carbon is established from future trading scheme phases.

The European Commission allowed NAPs that resulted in too generous an emissions cap in Phase I. Member State Governments are understandably keen to ensure they have enough allowances to avoid a shock to their economies, allowing businesses to reduce emissions by responding gradually to market signals⁴. However, in Phase I the level of allowances needed to achieve these goals was overstated.

Just as business habitually, knowingly or otherwise, overstates the costs of adapting to new environmental legislation⁵, economic interests (including Member State Government's at EU level negotiations) are also likely to overstate emissions allowance needs for two reasons. Firstly, they have an incentive to do so, as they may gain a short-term advantage if they receive a more generous emissions level than competitors (firms, sectors, or countries). Secondly, they may not, ex ante of market incentives, appreciate the collective energy efficiency/emissions savings available to them – this is why market mechanisms are referred to as the 'invisible' hand.

The emissions cap in Phase I of the EU ETS was too high, so it has failed to ensure that carbon is included in companies' investment decisions. Too high a cap on emissions results in a lose-lose-lose-lose for society, as:

- 1 The environment loses out because emissions are higher than otherwise
- 2 Carbon permit holders lose as the over allocation is revealed and the price collapses to near zero
- 3 Businesses lose out on opportunities to innovate, and find resource efficient solutions with an inherently lower cost base; and
- 4 Therefore, the economy loses competitiveness – it fails to achieve resource efficient outcomes, and misses opportunities to grow through the associated innovations and investments

These difficulties are the opposite of the potential benefits that the Aldersgate Group argues are available. The objectives of the EU ETS should be to achieve wins in each of these areas. To maximise the economic benefits of emissions trading, strong regulation is needed of, for example, the emissions caps in future phases, or the terms on which aviation is brought into the scheme. Policy must send a clear long-term signal about the future level and trend in the price of carbon, and thus help avoid shocks to the economy. Confidence in the tightness of future caps can benefit business – just the announcement of future constraints can stimulate resource efficiencies⁶.

4 While the long-term goal for emissions reductions is fixed by science, an objective for policy makers is to achieve this goal in the smoothest possible way for the economy. Fluctuations in prices can be managed by interventions, such as setting a maximum price in the market at which the Government sells more emissions allowances (effectively a tax on those unable to meet market constraints).

5 Environmental Audit Committee (EAC) Seventh Report of Session 2004-05, *Pre-Budget 2004 and Budget 2005: Tax, Appraisal, and the Environment*, HC 261.

6 For example, the UK's Climate Change Levy's 'announcement effect' resulted in a permanent reduction in energy use. [Cambridge Econometrics et.al. (2005) *Modelling the initial effects of the climate change levy. Report to HMCE.*]

2 The Distribution of Allowances

Once the level of emissions allowances (the cap) is agreed, a system is needed to distribute those allowances amongst emitters. There are two options:

- 1 Free allocation gives the allowances to emitters, based on current sector (benchmarked) or past (grandfathered) data;
- 2 Auctioning requires emitters to purchase their allowances.

They have different economic attributes in terms of incentives to reveal allowance needs and competitiveness:

Allowance Needs: The European Commission's regulation of Phase I NAPs, based on free grandfathered allocations, failed to determine the optimal cap on carbon emissions for society. Free allocation transfers wealth to emitters (a profit), and so creates an incentive for strategic behaviour from economic interests to lobby for a higher cap and allocations. However, as the scheme itself requires installations to provide independently verified emissions data on an annual basis, this over-allocation was revealed during the phase. This verified data also assists with regulation of allocations in subsequent phases, but the economy's interim changes mean that the strategic incentives remain.

Auctioning reduces these incentives. Auctioning transfers wealth from polluters to society (a loss to businesses that emit, in line with the polluter pays principle). As business is loss-averse, the loss entailed in auctioning provides an incentive to business to accurately state their emissions allowance needs as the auction takes place. As a result, auctioning leaves less room for strategic behaviour in relation to the emissions cap, as individual purchases at auction mean that demand for allowances, and a realistic price, are revealed earlier. This would benefit the economy, as it would create confidence in future emissions caps, and strengthen competition for carbon-reduction potentials. Auctioning therefore has an economic benefit as a result of reducing incentives for strategic behaviour in the cap-setting and allowance distribution process.

Competitiveness: Auctioning will place sectors at a disadvantage if energy is a major cost for them, and they face significant competition from firms located outside the EU not subject to allowance purchase costs and/or trading constraints. However, analyses of potential competitiveness impacts show that they have been widely exaggerated⁷. Furthermore, it could be possible to recycle auctioning revenue to the significantly affected sectors.

A system of free allocations gives the opportunity to vary allowances between sectors. This lets the distribution of allowances to take into account different abatement potentials (ie the cost-effective emissions reduction options available to sectors) and the importance to a sector of international competition. To reduce gamesmanship, such variations should be based on independently-formulated adjustments and benchmarks. Therefore, allocation can be more efficient in targeting known carbon-reduction opportunities.

The allocation of emissions allowances should not be based solely on static information about the costs of current abatement opportunities. It should also be designed to create incentives for innovations in carbon-efficiency that reduce future abatement costs. The current system of free allocation is failing to encourage investment in low-carbon energy generation capacity, as it provides allowances in proportion to different technologies carbon emissions⁸. Auctioning increases future costs for technologies with higher emissions, and so overcomes this failure.

In the long-term, it should be the EU's ambition for its ETS to be the basis of a global system, in which competitiveness considerations will be left to market forces to resolve. Therefore, the ability to move to full auctioning of allowances is needed, to show that the EU ETS is an appropriate system to assist the global transition to a low-carbon economy.

7
The impact of the EU ETS on many sectors may be neutral or positive [Grubb M, Azar C and Persson UM (2005) Allowance allocation in the European emissions trading scheme: a commentary. *Climate Policy* 5]; free allocations of emissions allowances have meant that some heavy polluters are effectively paid by the trading scheme. The combination of free allocation and full cost pass through (due to closed markets) is estimated to have increased profitability for the UK power generation sector by approximately £800m/year over Phase I [IPA Energy Consulting 11 November 2005 Report to DTI "Implications of the EU Emissions Trading Scheme for the UK Power Generation Sector"]. Significant impacts from emissions trading on the competitiveness of the UK economy have only occurred in a small proportion of industrial activity, that is worth around 1% of total UK GVA at a €15/t/CO₂ price [Climate Strategies (March 2007) Differentiation and dynamics of EU ETS competitiveness impacts. Interim Report].

8
Carbon Trust (2007) EU ETS Phase II Allocation: Implications and Lessons.

3 Off-setting

The EU ETS allows access to approved emissions off-sets (Certified Emissions Reductions, CERs, and Emissions Reduction units, ERUs) from Joint Implementation and Clean Development Mechanism (CDM) projects.

The use of external credits facilitates 'business as usual', and reduces incentives to improve resource efficiency in the UK or EU economy. Without harmonised restrictions across the EU, excessive reliance on external credits would remove the need for EU industry to improve resource-use efficiency and reduce emissions, delaying the transition to a low-carbon economy. For example, this could lead to lock-in to high carbon investments in heavy industry⁹, and the power sector¹⁰. This would have a negative effect on the EU economy, reducing the rate of innovation in carbon-mitigation, resulting in a failure to exploit the first-mover advantage the EU ETS offers.

The use of external credits represents an investment flow to carbon off-setting projects outside the EU. This may be beneficial to the recipients in the short-term¹¹, and encourages transition to low-carbon technologies elsewhere in the global economy. However, it is essential for the credibility of the EU ETS that approved off-sets are genuinely additional. While CDM criteria try to ensure additionality, it is not straightforward to regulate. Off-sets' additionality is inevitably subjective; being relative to a hypothetical future (what would have happened without the off-setting project?), which may not be easy to determine.

Approved off-sets may only slow the rate of increase in emissions in the country where the project is located. However, they increase the baseline of emissions across which the EU's cuts are taking place. These extra emissions have not been part of the baseline used to determine the cap in the EU ETS. Therefore, for off-sets to be part of a policy delivering a year-on-year fall in global carbon emissions, the EU ETS's emissions reductions would need to exceed the emissions growth in countries providing approved off-setting projects. This is unlikely in the foreseeable future.

Strong regulation can prevent excessive reliance on external credits. If the emissions cap is tightened far enough, the demand for off-sets, and therefore their price, will eventually rise until they are no longer cheaper than addressing emissions within the EU. However, the lower cost base and large scale of economies outside the EU, and the possibility that avoided deforestation projects will be eligible in future, means that the cap would have to tighten substantially. Therefore regulation should directly limit the use of off-sets. Caps already exist¹², but as these exceed the 5% cut against 2005 emissions for Phase II¹³, they may not have any impact on the level of emissions reductions required in the EU. Both these instruments need to have an effect. While the cap on emissions should be steadily tightened, meaningful restrictions on the use of off-sets are needed to ensure that the trading scheme results in emissions reductions within the EU economy in the short-term.

9 WWF-UK (2007) Emissions Impossible.

10 Point Carbon (2006) Carbon 2006: towards a truly global market. ~ Ssurvey found that the carbon reduction strategy in the power sector (which dominates the EU ETS) currently favours trade within the EU ETS and buying of off-sets, in preference to internal abatement options -.

11 They can also be beneficial to the wider environment if biodiversity-rich habitats are conserved, but such factors should be direct aims of parallel policies, rather than a reason to distort emissions markets.

12 Set at 10% of the allocation or 50% of the effort being made, whichever is greater, estimated to be equivalent to approximately 11% of emissions reductions requirements across the EU.

13 Carbon Trust (2007) EU ETS Phase II Allocation: Implications and Lessons.

Conclusion

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www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm

The Stern Review Report on the economics of climate change¹⁴ advocated the use of carbon-trading schemes, and emphasised the importance of robust institutions, and reliable data collection and provision to make such schemes effective.

Just as strong financial regulation supports efficient financial markets, a transparent and well-enforced system of measuring, verifying and reporting is crucial for securing the environmental credibility and the efficiency of the EU ETS.

Within the scheme's emissions cap, there is a trade-off between distributing emissions allowances by auctioning and free allocation. Due to competitiveness concerns and gaps in information about allowance values, auctioning has hardly been used. The lack of auctioning results in a failure to receive the economic benefits highlighted in the Aldersgate Group's argument. In the short-term, auctioning provides an economy-wide incentive for businesses to accurately reveal their emissions allowance requirements through what they purchase. In the long term, it strengthens the incentive to innovate or invest in low-carbon technologies. Significant levels of emissions auctioning will thus be an increasing part of an efficient path to a low-carbon economy. We suggest that the optimal mix of auctioning and allocation will involve a far higher proportion of auctioning than at present.

In the long-term, the major emissions reductions required to tackle climate change cannot be met only through actions outside the EU; technologies will need to change in Europe. Excessive reliance on external credits should be avoided by tightening the emissions cap and strong regulation. This will ensure that future trading phases of the EU ETS require emissions reductions in the EU, and reward the comparative advantage of EU businesses that are able to implement emissions reductions measures efficiently. If not, the EU economy will lose valuable time in relation to; the timetable of policy goals for climate stabilisation; the development of low-carbon business competitors outside Europe; and in the transition to a low-carbon economy.

Acknowledgement

The Aldersgate Group would like to extend its thanks to the following people and organisations for their contribution to the report.

Ian Dickie
RSPB

Tim Jenkins
Friends of the Earth

Membership of the Aldersgate Group

Atkins
Barratt Developments
BIFFA
BT
Christian Aid
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