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REVIEWING THE EU EMISSIONS TRADING SCHEME

PRIORITIES FOR SHORT-TERM IMPLEMENTATION OF THE SECOND ROUND OF ALLOCATION

PART I

REPORT OF A CEPS TASK FORCE

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This report is based on discussions in the CEPS Task Force on “Review of the EU Emissions Trading Scheme”, dealing with priorities for adapting the National Allocation Plans for the second phase of allocation. The Task Force met several times over a concentrated period of time from April to June 2005. Participants in this CEPS Task Force included senior executives from a broad range of industry – including energy production and supply companies, energy-intensive industries and service companies – and representatives from business associations and non-governmental environmental organisations. A full list of members and invited guests and speakers appears in Appendix 3.

The members of the Task Force engaged in extensive debates in the course of several meetings and submitted comments on earlier drafts of this report. Its contents contain the general tone and direction of the discussion, but its recommendations do not necessarily reflect a full common position agreed among all members of the Task Force, nor do they necessarily represent the views of the institutions to which the members belong.

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EXECUTIVE SUMMARY

Now that the EU emissions trading scheme (EU ETS) has come into operation and the first round of allocation has been completed, discussions have begun on how to adapt and amend the scheme in light of these initial experiences. The first phase (2005-07) currently underway was intended to be a pilot phase allowing for 'learning by doing'.

Adaptation and review will be undertaken in two steps. In the first step, changes can be introduced in the short-term implementation phase, especially to national allocation, based on the experiences of the first round of allocation. In the second step, as mandated by the Directive, a *formal strategic review* will be conducted by the European Commission, to begin no later than the end of June 2006.

This CEPS Task Force has addressed the first step, i.e. issues related to short-term implementation in two separate reports. This present report (Part I) focuses on harmonisation requirements (including resolving the Annex I definition of installation), consistency of allocation methodologies across member states, transparency of national allocation plans (NAPs), unilateral opt-ins for other gases and activities, and monitoring, reporting and verification requirements. A Part II report, to be published in the autumn 2005, will examine more fundamental topics, such as economic impacts, power market structure, effects on investment and the potential inclusion of aviation, which lie at the interface with the formal strategic review (as is indicated in section 1.3.)

After taking stock of the EU ETS, the report examines the need and potential for short-term improvement and makes concrete, operational recommendations to the EU member states and the European Commission.

The report does not provide a detailed analysis but rather a description (in section 3) of market-development issues, such as registry management; legal, taxation and accounting issues; the scheme's relationship with the relevant financial services regulation; and potential constraints due to the Commitment Period Reserve.

Looking ahead, this CEPS Task Force will not deal with the formal strategic review in 2006, i.e. the second step of the EU ETS review. This analysis will be undertaken by a separate CEPS Task Force to be launched in the end of 2005. Its report will deal, inter alia, with allocation methodologies for the third phase, the expansion of the scheme to new sectors and gases, the possibility to link with non-EU trading schemes, the relationship with the renewables Directive and also possible negative economic impacts including investment disincentives.)

I. Key Messages

1. The overall objective of the EU climate change policy is to reduce greenhouse gas emissions in general and to meet the Kyoto Protocol targets in particular. Since the EU ETS is the principal instrument with which the EU and member states intend to achieve these objectives, it will ultimately be judged on the basis of its effectiveness. Even though most member states are already off-target with respect to their emissions obligations under the Kyoto Protocol, the overwhelming majority of member states have nevertheless allowed for an increase of emissions from the trading sectors during the learning period of 2005-07. The long-term success of the EU ETS, however, will depend on whether it can ensure emissions reductions in line with EU and member state climate targets, in combination with other measures aimed at reducing emissions from all other sectors.
2. The EU ETS has also been chosen as the key instrument to reduce emissions as it has the potential to meet the environmental goal in the most cost-effective way. Yet whether this potential of least-cost abatement materialises depends on both the design of the scheme and the implementation practice. While fundamental design issues will require changes in the Directive, there are possibilities to introduce improvements in the second round of allocation. There is no reason why the EU and member states should not be able to take into account the experiences from the first phase of allocation to improve the second phase. Further, many changes can be implemented by coordination or by the Climate Change Committee, or by political agreement without the necessity of changing the Directive.
3. Success of the EU ETS depends, inter alia, on simplicity. While all stakeholders agree in principle to strive towards a simple and consistent scheme, there was pressure on governments to grant exemptions and special treatment in national allocations, which tends to increase complexity. An overly complex EU ETS will jeopardise attainment of both environmental and economic objectives, which, namely, are to reach the necessary reductions at the least cost.
4. There are several areas in which the ETS could be improved for the second phase of allocation. Among the most immediate areas are NAP-related harmonisation requirements, such as the definition of combustion installations, treatment of small installations, new entrants, closure and transfer rules. Other important areas include rules on allocation methodologies and, more generally, the transparency of NAPs, as well as monitoring, reporting and verification.
5. The Directive requires paying attention to issues of competitiveness. Since the competitiveness effects of the EU ETS are critical for the future development, it is important that this issue is constructively settled. Given the major differences between member states (e.g. location of competitors in the Mediterranean or effects of power markets), more information on national or regional effects may be needed to complement the European Commission's study on EU-wide impacts. It is important to consider realistic alternative policy instruments that could be applied rather than compare no regulation with participation in the EU ETS.
6. It is essential to address the investment conundrum in imaginative and practical ways. Some promising ideas include the use of long-term energy efficiency targets as an instrument to establish a long-term cap for the manufacturing industry or indicative long-term targets for the power sector or accepting a ceiling for the allowance price to provide better long-term certainty.

II. Recommendations

Applying the lessons learned

1. Since the first period (2005-07) has explicitly been designed as a pilot phase, there must be an opportunity to apply lessons learned from the first phase of allocation to the second phase. The aim should be to consolidate and simplify implementation of the EU ETS, whilst also incorporating the lessons ‘learnt by doing’.
2. The various legislative, regulatory/administrative or political options that are available within the existing legal framework should be exploited in order to adapt the EU ETS for the second phase of national allocation with a view to redressing the shortcomings that have been identified.
3. Should the European Commission and member states want to consider delaying the NAP timetable for a limited period, as some stakeholders have suggested, this should only be done on the condition that adequate time is guaranteed to allow for access to information and public consultation (see recommendations 16 and 17) as well as Commission scrutiny.
4. Adaptation of the EU ETS should aim at increasing the effectiveness and efficiency of the market, inter alia, by providing simplicity, transparency and long-term abatement incentives to achieve EU and member state climate change and other policy objectives whilst ensuring the competitiveness of European business.

NAP harmonisation requirements

5. The definition of combustion installations must be harmonised for the second phase as analysed in the main report.
6. Member states and the European Commission should address the issue of disproportionate burdens on small installations, provided that installations are subject to emissions limits.
7. At a minimum, a first step towards the harmonisation of methodologies on new entrants, closures and transfers as well as treatment of new entrants’ reserves should be taken as long as this harmonisation is compatible with national energy policy (as analysed in the main body of the text) to avoid ‘gaming’ and to prohibit a race to the bottom, and, ultimately, to maintain trust in the scheme.

It is noted that the absence of special closure rules – i.e. in case of closure, installations can keep their allowances until the end of the allocation period – could, in principle, and should encourage investment in cleaner technology, provided there is consistency of new entrant rules across member states and no additional transfer rules.

Allocation methodologies

8. Member states should strive to increase consistency of allocation methodologies to ensure that similar installations receive comparable allocation. Differences in the overall constraints in member states as a result of the Burden-Sharing Agreement could be smoothed over by the assignment of credits from the project mechanisms.
9. Both benchmarking (or performance-based allocation) and auctioning offer the potential to improve the consistency of national approaches. Member states should continue to further study both of these methodologies.
10. Should it prove difficult to obtain an overall agreement on benchmarks, member states could start developing them for certain dedicated sectors. Particular attention should be paid

to the advantages of benchmarks as a way to harmonise rules for new entrants, closures and transfers.

11. Most importantly, member states together with the European Commission could explore the possibility to use benchmarks as a tool for establishing a long-term cap, or comparing allocations between member states.
12. Member states that have chosen to auction a part of their allowances must ensure that auctioning is practical and consistent with the spirit and the letter of the internal market, especially the eligibility criteria for participation, timing and if it applies, the rules for revenue recycling. However, it should not be allowed that auctioning shifts the problem of allocation to recycling.
13. The European Commission should provide guidance on how member states should conduct auctions, and whether these may be closed or must be open at EU level.

NAPs

14. The European Commission and member states need to ensure access to information on the NAPs in an inclusive and non-discriminatory way to all stakeholders, to ensure transparency, accuracy and greater consistency of NAPs.
15. The European Commission and member states must also guarantee that the time frame for access to information and public consultation is adhered to. This is a precondition for transparency and accuracy.
16. Member states and the European Commission should agree on a common format of NAPs. This must contain an executive summary presenting key figures, including:
 - a) assumptions of economic and sector-specific economic growth;
 - b) explanation of methodologies to establish the total number of allowances;
 - c) Kyoto Protocol targets and the trajectory to get there;
 - d) more details on which member states can base their estimates to purchase proposed CDM/JI credits, including the expected share stemming from the linking Directive; and
 - e) publication of data on which allocation is based, including historical emissions and output or input data to facilitate analysis and comparability of NAPs.
17. The European Commission should provide guidance on an updated common format of NAPs.

Monitoring, reporting and verification

18. The European Commission needs to enforce uniform implementation of EU rules on monitoring, reporting and verification to nurture trust throughout the EU in the ETS.
19. The European Commission and member states should examine the possibility for further harmonisation of monitoring, reporting and verification with the ultimate goal to move to a single system, which would not only bring down transaction costs but also improve mutual trust.
20. Efficiency gains are especially possible in the area of verification. Accordingly, the European Commission and the member states should first explore whether to harmonise rules on verification.

21. Second, the European Commission and the member states should investigate whether to establish a common accreditation body that would be responsible for accreditation of verifiers on an EU-wide basis.
22. If harmonisation of rules at the EU level for both verification and accreditation of verifiers is not possible, at a minimum the accreditation bodies in all EU member states should follow similar rules for accreditation, which should ultimately allow for 'mutual recognition' of accredited bodies from one EU member state to another.

Market development and certainty

23. Given the importance of certainty and clarity on legal, tax, accounting and financial regulation issues to the market, efforts to clarify any issue that is unresolved in one or all member states must be increased.
 - a) The VAT committee should maintain a harmonised approach throughout the EU.
 - b) The work by the International Accounting Standards Board (IASB)/International Financial Reporting Standards (IFRS) to address inconsistencies in accounting between assets (allowances) and liabilities is welcomed while speedy resolution is needed.
 - c) Member states and the European Commission should act urgently to achieve clarity regarding the treatment of contracts under the markets in financial services Directive (MiFID) to avoid the risk that contracts are voided and participants are subject to penalties.
 - d) Registry managers in the member states should share information and best practices.
 - e) Member states should reinforce efforts that have already been taken to seek more cooperation in the further development of registries, particularly electronic interfaces.
24. Rules should be devised to avoid a breach of the Commitment Period Reserve clause under the Marrakech Accords to ensure that national registries are not blocked.

Expansion to other gases (unilateral opt-ins)

25. The inclusion of new gases could offer major environmental and economic benefits (i.e. coverage of more sources, potentially lower compliance costs if marginal costs in the trading sector are higher than in the installations to be opted-in). Therefore, member states should examine the possibility of unilateral opt-ins.
26. To avoid distortions within the internal market, unilateral opt-ins should be made in a coordinated and harmonised way and in parallel by virtually *all* member states where emissions occur, provided that the opt-ins are unanimously supported by the concerned industry.
27. Furthermore, unilateral opt-ins must fulfil a number of conditions, including:
 - a) Monitoring and reporting must be ensured.
 - b) The complexity of the EU ETS must not increase disproportionately.
 - c) Previous reductions made for economic or legal reasons must not result in over-generous allocation.
 - d) Double-counting must be avoided.
 - e) Lead times of abatement possibilities must be respected.

28. Most importantly, definitions and thresholds must be harmonised to avoid inconsistent definitions and placing undue burdens on small installations.
29. Further expansion of the system on a step-by-step basis is desirable, such that the key underlying premise of emissions trading to seek out the most cost-effective abatement opportunities in the economy is maintained. Therefore, the European Commission and member states should examine the opt-in of N₂O emissions from nitric acid plants, which seem to offer clearly defined and cost-effective reduction potentials and whose inclusion has been strongly endorsed by the EU industry.

REVIEWING THE EU EMISSIONS TRADING SYSTEM PRIORITIES FOR THE SHORT-TERM IMPLEMENTATION OF THE SECOND ROUND OF ALLOCATION

REPORT OF A CEPS TASK FORCE (PART I)

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Introduction

The EU emissions trading scheme (ETS)¹ is the cornerstone of EU climate change policy. Covering some 45% of total EU CO₂ emissions, it is the showcase of the EU's seriousness about climate change. Since the EU ETS accepts credits from the Kyoto Protocol's project mechanisms, it also has global reach. It offers the EU a platform from which to shape or at least to influence an eventual global trading scheme. For such a scheme to materialise, however, it is essential that the EU ETS can demonstrate that it is environmentally effective, economically efficient and politically acceptable. Proving the latter will to a large extent depend on the scheme's actual and perceived distribution effects.

The EU ETS was the first cross-border tradable permit scheme (or emissions trading as it is generally referred to in the EU) of this kind. Hence, 'teething problems' should be and have been expected. This was why the first phase (2005-07) was generally perceived as a pilot phase allowing for an element of 'learning by doing'. It was commonly accepted that a certain amount of adaptation would be necessary.

Reviewing the EU ETS will take place in two steps. First, there will be a number of valuable experiences from the first round of National Allocation Plans (NAPs phase I), which will inform the process of the second round of allocation (NAPs phase II). These lessons will be called *priorities for short-term implementation*. Adaptation will be possible, largely within the existing legal framework as the available time for major changes in the Directive through co-decision is most likely to be too short. Nevertheless, changes within the existing framework are possible if sufficient political will exists. Possible changes will be analysed in this Part I report and the follow-up Part II study to be published in the autumn 2005.

This report as well as the follow-up study Part II will not examine issues related to the formal review of the EU ETS that the Directive foresees to take place no later than June 2006. As this formal review, which will lead to an amendment of the Directive by co-decision, is likely to trigger a fundamental and longer term debate, issues related to it will be treated in a separate Task Force that CEPS plans to launch in late 2005. The Directive lists 11 items for review, including *inter alia* expansion to new sectors (e.g. other industrial installations and transport including aviation); inclusion of non-CO₂ greenhouse gases (GHGs) covered by the Kyoto Protocol; competitiveness and distributional effects; future (i.e. post-2012) allocation methodologies, including the possibility of using benchmarks; consistency with environmental and other policies; monitoring, verification and registry issues, especially whether there should

¹ Directive 2003/97/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emissions allowance trading within the Community and amending Council Directive 96/61/EC, Official Journal of the European Union, 25 October 2003.

be a single Community registry; and the relationship with International Emissions Trading (IET). (delete: We will call this the *formal 2006 Review*.)

This CEPS Task Force Report Part I focuses on a number of short-term implementation issues. (delete: principally related to the second round of allocation). They include NAP transparency requirements, the definition of installations, treatment of small installations, new entrants, closure and transfer rules, allocation methodologies, the possibility of opt-ins as well as monitoring, reporting and verification. It will examine the need and potential for adaptation of the EU ETS and its implementation practice. Our findings will be presented to EU member states, including the UK EU Presidency, and the European Commission.

After taking stock of the EU ETS in section 1 and focusing on market developments and certainty in section 2, sections 3 and 4 respectively provide the principal analysis on NAP harmonisation requirements and monitoring, reporting and verification. Concluding remarks are offered in the final section.

The main findings of the report are contained in the Executive Summary, including Key Messages and Recommendations.

The report has three Appendices. Appendix 1 reproduces Annex III of the EU ETS Directive (Criteria for national allocation plans) while Appendix 2 contains Annex IV of the EU ETS Directive (Criteria for verification). Appendix 3 presents a list of members of the Task Force and invited guests and speakers.

A follow-up Part II report to be published in the autumn 2005 will examine deep-seated topics such economic impacts, power market structure, effects on investment, the potential inclusion of aviation or the relationship to the renewables Directive, which lie at the interface of NAP phase II and the long-term formal 2006 review.

1. The EU Emissions Trading Scheme after six months

From the very beginning, the EU emissions trading scheme attracted considerable attention and was subjected to intensive analysis both within and outside the EU. Therefore, although it has been in operation for only six months and not all support structures are yet in place, there is nevertheless sufficient experience upon which to base an informed discussion on a possible review. This is especially true for allocation, as the first round of NAPs is almost completed.

1.1 Why emissions trading was chosen

Emissions trading in general and the EU ETS in particular were chosen as they promised to meet the environmental goal in the most cost-effective way by ensuring that the market price of carbon is equal to the lowest marginal abatement cost of all controlled sources. Therefore, the EU ETS should help to foster economic growth and employment. The resulting carbon price should create long-term predictability for business, a crucial factor in efficient investment decisions. In addition, it provides for a mechanism by which emitters – factory operators, oil refineries, etc. – can identify the most cost-effective way to reduce their emissions and thus factor carbon-reduction strategies into day-to-day business decisions. Emissions trading can go beyond existing environmental policy – mainly seen as an inescapable overhead – by establishing a long-term and predictable price signal upon which firms base investment decisions while still retaining significant flexibility to achieve the environmental objective. At the same time, emissions trading aims to provide environmental certainty by capping the overall

emissions level from the covered sources.² Combined with a robust compliance system (including for example credible penalties and an effective enforcement mechanism), emissions trading ensures that targets are met. It also lends itself well to dealing with the implementation of the Kyoto Protocol targets, as they are also expressed in absolute terms. As is the case with any change in the regulatory framework, the EU ETS has distributional impacts, i.e. it has created winners and losers.

Theoretical economic and environmental advantages of least-cost abatement depend to a considerable degree, however, on the market architecture, comprising design (e.g. directives) and implementation practice (e.g. NAPs). Ultimately, both efficiency and effectiveness of the EU ETS will depend on the interaction of allocation, the functioning of the secondary allowance and the primary power (or other affected product) markets.

The EU and member states operate within a triangle of environmental effectiveness, efficiency (including simplicity) and distributive impacts. While efficiency and environmental effectiveness by and large are compatible and even are mutually dependent, it is mainly attempts to address distributive effects that have proven to undermine the efficiency, notably by adding complexity or by changing the incentive structure. There is compelling and well-documented evidence that the original US trading schemes from the 1970s failed because they suffered from over-complexity, which undermined economic efficiency and eroded incentives. These early emissions trading schemes were subsequently abandoned for what became the SO₂ emissions trading scheme.³

Generally, it can be said that member states, in balancing the triangle of objectives, tend to emphasise the distributive impacts (sometimes referred to as 'fairness') over effectiveness and efficiency/simplicity. This emphasis, however, tends to add complexity to the scheme. Member states seem also to have forgotten that market efficiency in most cases does not contradict environmental effectiveness.

1.2 Short-term implementation for the second round of allocation

Now that the first round of allocation is almost completed, a number of concerns have been identified. An important concern is that of environmental targets, because most member states have allowed emissions from the covered sectors to rise in the period 2005-07, despite the fact that many must reduce their emissions to achieve their Kyoto Protocol targets. For example several member states have allowed their covered sectors to increase emissions by as much as 10 or 20%, although they are on a trajectory that will them not enable to meet the Kyoto Protocol targets. Other concerns relate to the high degree of decentralisation with a considerable level of member state discretion in the allocation process (i.e. NAP-related issues). This has led to inconsistencies between member states, which could distort competition, diminish the efficiency of the market and ultimately, undermine environmental effectiveness and the trust placed in the system.

Issues related to national allocation include harmonisation requirements in a number of areas such as transparency needs, the definition of combustion installations, treatment of small installations, rules for new entrants, closures and transfers, allocation methodologies (notably their consistency) and opt-ins of other gases. There is a wide agreement in principle within the European Commission, member states, industry, NGOs or traders and stakeholders that harmonisation would be beneficial.

² This 'environmental certainty' extends only to the covered sources. There is a risk of 'leakage' unless caps or similar measures are applied worldwide.

³ See Klaassen (1996) and Godard (2000). For an overview, see Egenhofer (2003).

The petrochemical industry offers a good illustration of the consequences of a lack of harmonisation in which the inclusion of crackers in the EU ETS depends purely on the plant's location. Only those member states with a broad definition have included them, whereas in others they are excluded. There are even different rules within member states (see section 3.2). Another example of potential inefficiency is the treatment of small installations, which in some cases have to bear disproportional transaction costs that by far outweigh the benefits. A similar situation can be found in the area of monitoring, reporting and verification where we can currently count more than 50 different systems in operation. Inconsistencies not only create distortions to competition but they are also responsible for unnecessary transaction costs that may undermine the system.

Nevertheless, a look to the past suggests that achieving harmonisation may be very difficult. Member states have opted for a high degree of decentralisation to maintain considerable influence, notably over allocation, for reasons of competitiveness and distributive impacts, i.e. to 'help' their companies. Member states have been reluctant to impose stricter targets on 'their' industries than do other member states. This attitude has not changed.

1.3 A reminder of some fundamentals

It is necessary to address short-term implementation issues for effective implementation of the EU ETS including its economic efficiency and viability, but they are not sufficient on their own. In addition to the questions on the stringency of member state caps, the EU ETS has raised a number of more fundamental questions – including economic impact, the consequence of a lack of certainty and its effects on investment but also the Directive's relationship with the renewables Directive. These issues lie at the interface of NAP phase II and the long-term formal 2006 review. Hence, they will be analysed in a follow-up Part II report to be completed in September/October of this year together with other principal topics of this review, such as for example allocation methodologies for the third phase, the expansion of the scheme to new sectors and gases and the possibility to link with non-EU trading schemes.

Economic impacts

The level of anticipated power price increases and especially the extent to which the power generators will earn increased profits as a result of higher power prices without incurring additional costs, is likely to remain subject to debate (IEA, 2004 and Egenhofer et al., 2005). See also Box 1.

It is generally agreed that the EU ETS will mainly affect the costs of energy-intensive industries indirectly through higher power prices. The actual impact on individual industries, however, remains controversial. There are two principal reasons for this disagreement: i) debate over the effects of the EU ETS on power prices, which are expected to vary in different markets (Egenhofer et al., 2005, pp. 17-21 and ILEX, 2004) and ii) differing abilities of sectors to pass through costs⁴ in different product markets.⁵ The one notable exception to the general finding is

⁴ The latter was the reason why energy-intensive industries in the UK challenged the Carbon Trust (2004) study.

⁵ According to the theoretical and empirical literature, environmental policy is but one of many factors that firms take into account when making investment decisions. Empirical knowledge of country-specific relocation effects is very limited, especially in Europe. The existing empirical evidence of the interaction between environmental policy and the effects on competitiveness remains largely inconclusive (Scholz & Stähler, 1999 and Ederington et al., 2003). The idea that environmental policy undermines competitiveness is often based on a static view of competitiveness, in which technology is considered exogenous (i.e. decoupled from environmental regulation).

the aluminium industry, where studies (e.g. Carbon Trust, 2004 and IEA, 2004) concur that it is directly affected in its net value as a result of the fact that the sector cannot pass on price increases, as product prices are set by international commodity markets. The same may be true for certain product markets in other sectors, for example BOF (basic oxygen furnace) steel.

In addition to issues of different sectors' 'ability to pass through costs', another determinant of the competitiveness of EU industry is how quickly non-EU producers can increase their production in the short-term. It is, therefore likely, that negative effects on competitiveness do not fully come into play in the short-term. This is even more true if investors assume that over a reasonable period other countries will gradually become subject to carbon constraints.

Since the competitiveness effect of the EU ETS is extremely critical for future development, it is important that this discussion continues and ultimately is satisfactorily settled. In light of the major differences between member states (e.g. location of competitors, such as in the Mediterranean, or the effects of power markets), it was suggested that member states or groups of member states or other stakeholders should undertake their own studies, concentrating on national or regional impacts. Such analysis should consider realistic alternative policy instruments that could be applied, rather than comparing no regulation with participation in the EU ETS. The European Commission should start to identify possibilities to address the topic in consultation with the covered industry and other stakeholders.

Box 1. Conclusions from a previous CEPS Task Force (2005)

The expected economic impact of the EU ETS has been subject to a great number of studies prior to the launch of the scheme. Available studies have been reviewed in the previous CEPS Task Force on *Business Consequences of the EU ETS* and summarised as follows:

The EU ETS will have an impact on the competitiveness of energy-intensive industries such as cement, pulp and paper, glass, steel/metal, aluminium, chemicals and refining. This impact will occur regardless of whether or not the sectors are covered by the EU ETS. For those industries outside the scope of the ETS, the impact will come from higher power prices ... For those industries falling within the scheme's scope, the impact will not only come from higher power prices but also increased costs from process emissions unless member states have given special treatment regarding process emissions. Consequently, some energy-intensive industries may suffer a competitive disadvantage owing to the fact that competitors of the EU industry may not be subject to the same constraints. For some industries, the competitive disadvantage is related to the geographical proximity of competitors (e.g. refining or cement production in the Mediterranean countries). For others it is related to the fact that cost increases cannot be passed on due to prices being set on the international commodities markets (e.g. parts of the energy intensive-industries, most notably aluminium). ... The ultimate cause for the potential competitiveness problems is the fact that not all competitors of EU industry are subject to an equivalent carbon constraint.

Source: Egenhofer et al. (2005).

Power market structure

There is also a fear that free allocation based on historical grandfathering might increase market power and that the resulting windfall effect will strengthen the market position of the incumbents to such a degree as to undermine competition and simultaneously inhibit new entry. Many of the EU's power markets suffer from a high degree of concentration (Egenhofer & Gialoglou, 2004 and European Commission, 2004). Market power concentration may create some barriers to entry in the retail supply market. Ultimately, power markets would be less competitive and result in higher power prices.

Investment

Investment (dis)incentives have been another concern of the analyses carried out on the EU ETS. In its initial stage, it is highly likely that the EU ETS will add to investment uncertainty in the covered sectors and as a result, new investment may be deferred.

In response, there has been some discussion on how to create greater stability and predictability in the EU ETS, such as establishing longer-term allocation periods, aligning targets with the investment cycle by using for example long-term efficiency targets as an instrument to set a cap for the manufacturing industry, setting ceiling prices of allowance prices, or more generally by improving consistency between current and envisaged (short- and medium-term) policies and long-term objectives. This will be further discussed in the follow-up Part II CEPS report to be published in September/October 2005.

Relationship to the renewables Directive

The EU renewables Directive⁶ aims at achieving 22% of electricity from renewable sources of energy in the EU by 2012. The overall EU target has been broken down into national targets, which are set out in the Annex of the Renewables Directive similar to those enumerated in the burden-sharing agreement. The renewables Directive mandates member states to support development of renewable sources by support mechanisms, which in most cases takes the form of financial support. The two instruments – the ETS and support for RES-E (renewable generated electricity) production – pursue different objectives. One aims to increase the share of renewables (i.e. supply) while the other seeks to reduce GHG emissions (i.e. supply and demand measures). Yet, a member state's policy can have a major impact on the EU ETS and vice versa.

1.4 How to adapt the ETS and when?

After completion of all National Allocation Plans (NAPs), the European Commission has approved 6,572.4 billion metric tonnes of allowances (for the period 2005-07) from 11,428 installations. The European Commission reduced allocations by over 290 Mt (millions of metric tonnes) and agreed that unused reserves would be cancelled (European Commission, 2005). In addition, the European Commission has rejected what it considers *ex-post* adjustments, which in its view would undermine the certainty of the total number of allowances (i.e. a cap) that is needed to make the system work. Allowing for *ex-post* adjustment would make governments vulnerable to pressure from companies to make further 'adjustments'.

In theory, there are four ways of adapting the EU ETS for the second round of allocation:

1. Amendment of the Directive⁷ under Art. 30 through co-decision. As the co-decision procedure could take up to two years or more – the average time for a proposal to be adopted in co-decision is around 18 months, excluding conciliation – it will be next to impossible to amend the Directive until phase II of the NAPs, which is due to be completed by 30 June 2006. Should the political will exist, there is however a conceivable possibility to postpone the NAPs for a short period.

⁶ Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the Promotion of Electricity from Renewable Energy Sources in the Internal Electricity Market, Official Journal L 283, 27 October 2001, p. 33.

⁷ Directive 2003/97/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emissions allowance trading within the Community and amending Council Directive 96/61/EC, Official Journal of the European Union, 25 October 2003.

2. Amendment of some of the Annex III criteria via so-called ‘Comitology Committee’ procedure. However, the European Parliament tends to be critical of this procedure as it can be seen as undermining the EP’s role in co-decision.
3. Via the European Commission’s updated Guidance Document⁸ but this will be non-binding on member states.
4. Unilateral or joint actions by member states.

In addition, the Directive foresees a formal review of the EU ETS (by no later than 30 June 2006), which will amend the Directive by co-decision-making. The Directive lists 11 items for review, including inter alia expansion to new sectors (e.g. other industrial installations and transport, including aviation); inclusion of non-CO₂ greenhouse gases (GHGs) covered by the Kyoto Protocol; competitiveness and distributional effects; future (i.e. post-2012) allocation methodologies, including the possibility of using benchmarks; consistency with environmental and other policies; monitoring, verification and registry issues, especially whether there should be a single Community registry; and the relationship with International Emissions Trading (IET). These will not be covered in this report.

2. Market development and certainty

In addition to environmental effectiveness, market efficiency is a crucial criterion by which the success of the ETS will be judged. Only a market that functions properly will be able to achieve the promised efficiency gains. Market efficiency depends on the one hand on proper support structures and clarity and consistency of the rules that affect the operation of the scheme. Typically, this includes support structures such as registries; monitoring, reporting and verification (the latter of which is treated separately in section 4); and clarity and consistency with ETS objectives of economic regulation such as legal, tax, accounting or financial regulation and which are usually described as market development issues. In addition, the market and its efficiency are influenced by design and implementation of the scheme and the way it will be further developed. Design and implementation principally relate to allocation (including member states’ caps, expansion, CDM/JI credits or treatment of new entrants’ reserves) and future development of the EU ETS such as expansion, linking with other schemes or the relationship with international emissions trading. All these factors influence supply and demand and price, firm behaviour, the environmental outcome and investment.

2.1 Market development issues

A first set of issues resides largely outside the scope of the Directive and relates to uncertainties regarding legal, taxation or accounting issues and treatment under financial services legislation. Another category includes support systems, such as registries or monitoring, reporting and verification. Addressing all these topics will take time even if there is a consensus, as they raise many difficult technical issues.

⁸ Previous Guidance Document: European Commission (2003), *Communication from the Commission on guidance to assist Member States in the implementation of the criteria listed in Annex III to Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, and on the circumstances under which force majeure is demonstrated*, Brussels, 7 January, 2004 COM (2003)830final.

Legal, tax, accounting and financial services regulation

The EU ETS has posed a number of tax and legal uncertainties for companies with an international CO₂ portfolio and that operate actively in the cross-border market. Some questions have been raised on the character of ownership of the allowances: e.g. whether the buyer of allowances has full or beneficial ownership and whether security lending is permitted. Another issue is pre-emption rights for tax agencies or other pre-emption rights in case of insolvency regarding the allowance property of an EU ETS participant. Pre-emption rights for tax agencies regarding the allowance property of a participant in emissions trading will increase the uncertainty in forward transactions and may conflict with insolvency regulations in individual member states. Uncertainty on the legal status of the allowances will also lead to uncertainty regarding liability and accounting. Therefore there is a need to clarify any issue that may remain outstanding in all or some member states. Of particular relevance is how to treat insolvent installations.

It is encouraging that there has been major progress on VAT after the EU VAT Committee decided to endorse the harmonised interpretation of the VAT treatment on emissions trading (VAT levy in place of supply). It is hoped that the VAT Committee will maintain a harmonised VAT treatment throughout the member states.

EU allowances (EUAs) as intangible assets need to be accounted for in the company accounts. Depending on price developments, EUAs may constitute a major factor in a company's profit and loss account (P&L). According to the financial reporting guidelines drafted by the International Financial Reporting Interpretations Committee (IFRIC) in December 2003, the valuation of these intangible assets can lead to mismatches in the accounts. The reason is that assets (allowances) are valued at cost in accordance with International Accounting Standard (IAS) 38, and the reported liability is measured at market value (IAS 37). As a result, the impact of emissions trading on profit and loss account and balance sheets is thus determined by reporting rules rather than by performance. The fact that advice from the European Financial Reporting Advisory Group (EFRAG) to the European Commission is pending increases uncertainty on how companies should report allowances. This uncertainty is further increased by the fact that accounting treatment of government grants, which could include EUAs, is currently under review by the International Accounting Standards Board (IASB).

The work by IASB/IFRIC to address the mismatch issue should be welcome as it is important to complete work as soon as possible to give certainty. To the extent that accounts will be prepared under the existing (IFRIC 3) rules, there should be clear notes accompanying company accounts in order to help relevant parties (directors, shareholders etc) understand the way that emission allowances have been accounted for and that apparent effects on profit and loss figures may need to be treated with caution. At its February 2005 meeting, the IFRIC considered possible ways of amending IAS 38 to allow emissions allowances to be measured at fair value with gains and losses recognised in profit or loss. Such a solution on the part of IFRIC to amend IAS to ensure that allowances (assets) and emissions (liabilities) would both be valued at fair value (market price) and that changes in their value would be recognised as profit or loss would be welcome.

Trade and traders under the EU ETS fall under the new Directive on market in financial instruments (MiFID), for which the framework Directive has been adopted.⁹ Detailed implementation is currently underway through a number of implementation directives. In theory, this should lead to harmonisation across member states of the currently fragmented financial services market. Ideally, the MiFID via increased harmonisation will bring about a

⁹ Replacing the Investment Services Directive.

more efficient market. The need for certainty and clarity for market participants is important, given that contracts that are entered into without the necessary financial regulation authorisation may be void and the participants subject to penalties. At the same time, it is important to ensure that financial and regulatory requirements are kept to a minimum. More strict regulatory requirements for participating emissions traders (e.g. capital reserve requirements) can become a severe barrier to market entry. Emissions trading has been imposed on the participants by EU legislation and should not be hindered by other EU directives. Therefore the MiFID Directive that is currently being drafted should take easy access to the EU ETS into account and not produce additional financial or regulatory burdens for participants in the EU ETS. Member states should deliver some level of harmonisation to enable smoother market operations. In the current situation, licenses are obligatory in some countries, whereas in other countries they cannot be applied for. These differences between member states regarding financial services regulation result in a fragmented market and should be addressed by the member states as well as by the European Commission. This process should lead to a clear distinction between transactions in emissions trading that are governed by financial services regulation, and those that are not.

Support systems

Registries lie at the core of the EU emissions trading scheme. National registries are a precondition for trading, except for forward transactions. Since the latter are expected to be settled in the last months of 2005, registries should enable transfers of EUAs and CERs (certified emissions reductions). A precondition for the actual use of CERs and ERUs in the EU ETS is that both the ITL (international transaction log) and CDM (clean development mechanism) registry are in operation. In order to make an impact in the first period, they should come into operation by 2006. While ITL and CDM registries are not issues for the EU alone, the EU could make their operation a priority within the international negotiations, e.g. ensuring the necessary financial resources for their development. In this context, the functioning of the CDM Executive Board will also impact the EU ETS. Furthermore, registries are a precondition for spot trading, which will help to make the market more mature and liquid. Spot trading increases liquidity as it makes the market more accessible by lowering the financial and delivery risk.

Now that registries are being set up, there may be scope for continuous improvement. The European Federation of Energy Traders (EFET) has suggested a structured dialogue between Registry Managers to share experiences with a view to furthering their developing. A number of member states are jointly working to establish an electronic interface for the registries, which is expected to improve communication with the registries, especially for participants with multiple accounts and for trading platforms. The electronic interface will facilitate increased transactions as speed increases and errors are diminished compared with manual input. Existing systems for international gas and electricity trading could be used as a basis for such systems. Electronic interfaces can improve the communication with the registries, especially for participants with multiple accounts and for trading platforms. In the near future, very large numbers of transactions will have to be communicated to the registry at the same time (e.g. the delivery date of most 2005 forward transactions is December 1, 2005). This will only be feasible when trading companies can send their input data electronically to the registry. Manual input of these data could lead to a delivery delay and could also be a source of transaction errors. Sharing information and best practices among the registry managers of the member states will improve the quality of the registries. A structured consultation process among registry managers and market participants would be advisable, such as the initiative of a number of member states to seek more cooperation in further development of the registries. The early experiences with the German registry bring about the need to solve the liability issues resulting from failure of the registry. For example, the Defra-developed GRETA Registry software is currently licensed to

12 states. A collaborative alliance has been established between current licensees and Defra, which is underpinned by a memorandum of understanding. All parties share their experiences in relation to the registry, and this information is then used to enhance the registry's functioning. The UK (Defra) and France (CDC) are working together to provide an international solution that will allow trading platforms and electronic accounting systems to communicate automatically with registries.

2.2 Policy certainty and stability

The EU ETS requires clarity in the structure of the emissions market and predictability and continuity in the event of major change. Clarity and transparency of NAPs for example concern the absence of *ex-post* adjustments, treatment of the new entrants' reserves, the situation on inclusion of other gases or sectors and the mechanics of auctioning for those member states that want to use it. Of particular importance for the latter is the availability of reliable information on total numbers to be auctioned, timing and eligibility criteria for participation. Consistency and eventual harmonisation should generally be beneficial from a market efficiency point of view, although it is not a precondition for an emissions market. Functioning markets generally can accommodate differences by price differentiation. What is most important as long as NAPs differ is that they provide full transparency. For a start, such transparency can be achieved by an updated common format of NAPs with minimum requirements for the content (see section 3.1).

The EU ETS cannot be contemplated in isolation from international developments. For example, the Bonn Agreement, later to become part of the Marrakech Accords, requires each industrialised country Party to maintain in its national registry a commitment period reserve (CPR) which "should not drop below 90% of the Party's assigned amount...or 100 per cent of five times its most recently reviewed inventory, whichever is lowest". This clause could cause a situation in which a national registry is blocked because a member state's allowances reserves is less than 90% of its emissions. Such a situation could undermine the emissions market as a whole by excluding some countries and could raise issues of fairness, for example, by making a trading company that is in full compliance with EU ETS rules a 'victim' of a member state's non-performance. One way to solve this potential problem could be to apply the CPR rules (attached to the Kyoto Protocol target) to the EU-15 bubble and not to individual member states. New member states, except perhaps Slovenia, are unlikely to be affected by CPR rules.

An alternative is Art. 50(2) of the Commission Registries Regulation, which (paragraph 3.8) calls for member states to be warned by the Commission when a registry is approaching a breach of their CPR, but does not set out consequences of a breach. In such a case, the member state in question could buy AAUs to void the breach and to ensure that registries are not blocked. It is important that this issue should be discussed further by member states and the European Commission, with a view to clarifying and agreeing a position.

Other areas that impact certainty and stability is allocation and notably rules on new entrants, closures, transfers, opt-ins and allocation methodologies (analysed later in sections 3.4-3.6). Rules on new entrants, transfers and closures should be clear and unambiguous, to enable market analysis. Rules should be set in a way that makes it feasible to execute and maintain them. There should be clarity in the NAPs about what happens to new entrant reserves that are not depleted, as unexpected cancellation or dumping of these reserves will distort the market. Lack of harmonisation allows for gaming and market inefficiencies as well as for increased complexity. In addition, there is the issue what to do with new entrants' reserves if they are not used as this could create uncertainty and significantly affect prices.

From a market perspective, expansion of the scheme (via new gases or sectors) is beneficial as it increases liquidity and supports the market (see section 3). This cannot happen, however, until

accurate monitoring and reporting (section 4) are put in place, administrative costs and complexity are brought down to reasonable levels and the abrupt changes and volatility in the allowances market are brought under control. The benefits of inclusion of other sectors have to outweigh the possible disadvantages, which might include less transparency, unreliability, high administrative costs or a sharp change of allowance market prices. For example, if a sector only includes small emitters, the environmental benefit may remain small but overall costs of the scheme will increase (see also section 3.6).

3. NAP-related harmonisation requirements

A main feature of the EU ETS is its high degree of decentralisation, especially the way in which the scheme leaves the allocation *process* in the hands of member states. Consistency across member states is sought by the Comitology Committee, which consists of the European Commission and member states and which oversees implementation and provides non-binding guidance in the form of a European Commission ‘Guidance’ document¹⁰ and on EU law such as EC competition law, notably state aid provisions. There has been a tension between the Commission’s priorities and the member states’ preferences to prevail in areas such as energy policy, accepting their use of the Kyoto Protocol’s flexible mechanisms and considering the need to ensure the integrity of the scheme and avoid distortions to competition.¹¹ This tension was further exacerbated by the burden-sharing agreement, which has defined differentiated targets for the previous 15 EU member states.

During implementation, especially NAPs phase I, a number of inconsistencies¹² across member states emerged that may undermine the effectiveness and the efficiency of the scheme or potentially distort competition in the internal market. This report examines the key issues that can be addressed in the short-term in the run-up to NAPs phase II and could eventually lead to an improvement of the EU ETS implementation process. Additional analysis on some of the fundamental issues raised in section 1.3 that can still be addressed in the context of the NAPs phase II will be provided in the follow-up CEPS report in September/October 2005.

The analysis in this report attempts to achieve a ‘good balance’ between different objectives: i) environment (i.e. meeting targets from the KP and expected future targets); ii) efficiency (i.e. short- and long-term incentives and simplicity); iii) internal market integrity; and iv)

¹⁰ European Commission (2003), *op. cit.*

¹¹ This tension is found in Annex III of the Directive (reproduced in Appendix 1 of this report), which sets general criteria that should guide national allocation. During the negotiations of the EU ETS, there were attempts for example by the European Parliament to make Annex III more detailed, but they failed due to member states’ reluctance to cede ‘too much’ influence – as it was seen – to the European Commission on allocation, which in the end will be the key determinant of the carbon constraint for every company and by extension the economic burden for the covered sector. The EU could not even agree on a common methodology upon which member states should base national allocation, except that the main method of allocation should be free of charge.

¹² The CEPS Task Force Report on *Business Consequences of the EU ETS* (Egenhofer et al., 2005) singled out harmonisation as the top priority for the EU in the run-up to NAP Phase II. Particular emphasis was placed on *new entrant and closures* rules: “The absolute priority for the EU and its member states in the run-up to the next round of allocation plans must be to significantly improve the coherence of National Allocation Plans (NAPs) across the EU. These plans must also be consistent with the internal market’s economic objectives – notably including the treatment of new entrants and plant closures, which could potentially distort competition – but also environmental objectives stemming from the Burden-Sharing Agreement or the Kyoto Protocol.”

competitiveness (within EU and between EU industries¹³ and third countries). These are based on the following *four* operational considerations, which in some cases may be mutually compatible while in other cases are contradictory and therefore constitute a trade-off to be addressed by policy-makers: *transparency*, *feasibility* (practical, political including competitiveness), providing a *long-term perspective* (i.e. developing the EU ETS to meet the long-term climate change challenge), and designing appropriate *incentives* (for both the short and long term).

The following section suggest the importance of bearing in mind transaction costs when considering any further development/revision to the system. The EU ETS including its revision should ensure that the benefits justify the costs. This is important for all areas that will be discussed in this section (e.g. transparency of NAPs, lack of a common definition of combustion installation, allocation methodologies) but most relevant for new entrants, closure and transfer rules and the treatment of small installations, as well as for monitoring, reporting and verification, which will be treated in chapter 4.

3.1 Transparency of NAPs

Annex III of the Directive, guiding national allocation requires the involvement of the public. Non-discriminatory access to information and public consultation has been identified as a means to ensure transparency and accuracy of NAPs. Such transparency and accuracy is important both to avoid competitive distortions and ensuring that environmental objectives are met. It underlines also the need for transparency in the allocation methodology and the importance of the process being perceived to be fair, both in the level of action that is required from EU ETS installations as opposed to the rest of the economy and between and within different EU ETS industry sectors. To increase transparency, the European Commission has proposed a common format for NAPs¹⁴ as well as six steps and when member states submit their plans (European Commission 2003a).

Involvement of the public will in principle be guided by rules and practices of member states. The Guidance document on page 20 requires a “reasonable time frame” to be allowed for public consultation to allow EU ETS companies, environmental non-governmental organisations and other stakeholders to comment on proposed allocations. During NAPs’ phase I, the consultation period for many NAPs has been short, mainly for reasons of late delivery of some NAPs.

Availability of data upon which the allocation has been based has been difficult to obtain. To assess and scrutinise NAPs however, as a minimum requires basic data such as on historic emissions and preferably also output or input numbers. For NAPs phase I it was difficult to obtain that data from most member states.

NAPs phase I were complicated not only by data but also methodological uncertainties. Most member states had to rely on existing projections or revisions to existing projections. There has been insufficient time available to undertake a major modelling exercise, let alone in a co-ordinated way. Hence, the different methodological approaches were varying. The application of different methodological approaches may make the base for comparison uneven. There was also uncertainty on whether certain methodologies could be accepted. In the light of experiences, further guidance by the European Commission on methodologies to calculate total quantities of allowances could increase certainty and comparability.

¹³ The perspective will be EU-wide without specific member state references or even firm-specific analysis.

¹⁴ Annex of Guidance Document.

Many member states have justified deviations by projected purchase of CDM/JI credits. As there is a major uncertainty on the scale of such credits available, many of the existing projections risk turning out to be overly optimistic. The European Commission could provide further guidance on the use of JI and CDM, especially on what evidence member states have to provide to justify projected quantities of CDM/JI credits.

Transparency and the possibility to scrutiny could be greatly helped if member states and the European Commission could agree on an updated common format of NAPs, containing at least an Executive Summary including key figures such as on assumptions of economic and sector-specific economic growth, explanation of methodologies to establish the total number of allowances, Kyoto Protocol targets and the trajectory to get there, details upon which member states base their estimates to purchase proposed CDM/JI credits including the expected share stemming from the linking Directive and publication of data upon which allocation is based including historic emissions and output or input data. The Commission's new Guidance document could improve on the standard format of NAPs.

3.2 Definition of combustion installations

There are differences in the way by which member states interpret the definition of installations. The narrow interpretation would cover energy production sector and would exclude power units above 20MW associated with process energy. While some member states initially had planned to apply this definition, they extended the scope of definition more recently so that the narrow definition is not used any more. But there are still major discrepancies between the medium definition, which covers production of electricity, heat or steam for the purpose of energy production¹⁵ and the broad interpretation, which includes the production of electricity, heat or steam in general.

As an illustration, a company that operates cracker installations or joint ventures in different member states (e.g. the Netherlands, UK, France and Germany) can face a situation in which the installation in the Netherlands falls under the EU ETS, although benefiting in reality from the opt-out clause in the first phase, while its installation in both the UK and France do not fall under the ETS. And in Germany, it would depend on the type of permit the installation has been granted.

Inconsistency across borders can lead to market distortions as well as allowing for gaming of industries when planning new investment. In addition, it may also have negative environmental consequences as large installations with high emissions remain outside the coverage. Hence, there is an interest in agreeing to a common definition. Ideally, member states could agree on harmonisation on a voluntary basis for example on the basis of a political statement by ministers. This might however be difficult and could possibly take a long time as member states more or less evenly apply both definitions. Another possibility is further clarification of Annex I by the European Commission by for example an explanatory note although this will be non-binding. As a measure of last resort is that the European Commission starts infringement procedures on the basis that some member states apply a definition that is not in line with the Directive. The member states having chosen another definition than the one finally chosen will have to move to that one. Such a process could take several years. On the other hand, the broad definition will most likely include small installations, which has its own problems as will be showed in the next section.

¹⁵ For example excluding crackers, cookers or furnaces.

3.3 Treatment of small installations

Related to the definition of combustion installation is the treatment of small installations, especially the issue on whether to exclude them from coverage of the scheme. A broad definition generally can lead to the inclusion of many small installations. The inclusion of small installations can lead to high administrative costs for both governments and the covered sources, compared to the environmental benefit. However, a distinction must be made between initial, i.e. one-off costs related to the start of the scheme and recurring costs related to the operation. According to Actal, the Dutch Advisory Board on Administrative Burdens (2004), costs associated with small installations amount to € 9,000 per installation, excluding costs for verification.¹⁶ Typically small installations emit less than 25,000 tonnes of CO₂, which amounts to an additional cost of more than €2.5 per tonne of CO₂. Figures for the UK have proven to be even higher, especially for installations emitting less than 5.000 tCO₂ p.a.. While during NAPs phase I via the use of the opt-out clause, governments had a tool at their disposal, such opt-outs are not possible for NAP phase II.

Given the sometimes high costs associated with small installations, there is an economic case to be made to exclude small installations on the basis of a cost and benefit comparison with jeopardising the environmental objective. This is even truer as long as it is ensured that such installations would be subjected to an equivalent action which incurs less transaction costs. The case is further strengthened by the European Union's drive for "better regulation" as part of the Lisbon agenda and the White Paper process on governance.

Provided that there is an agreement that the issue needs to be solved, theoretically, there are different ways of tackling it. An initial and *first* simple solution would be to attempt lowering costs for monitoring and to review whether member states could reduce costs associated with small installation. However, in many cases the real problem for small installations is the lack of management time. Hence, should lowering costs for monitoring and reporting not be possible or sufficient, an additional or alternative measure could be to introduce *a de minimis* rule for small installations. With this solution, there is however, the risk for gaming and this might still require monitoring, hence additional costs and management time. According to Ecofys (2005), the *best* option would be to lower the CO₂ threshold. For example, excluding installations with emissions lower than 10,000 tonnes CO₂/year would mean to reduce the number of participants in the EU by 32% (or about 3400 participants), but decrease emissions coverage in the ETS by only 1%. Excluding installations under 25,000 tonnes CO₂/year would reduce the total number of participants dramatically (-55%), while reducing the included emissions by only 2.4%. Finally, setting the threshold at 50,000tCO₂/year would reduce the number of participants by 70% but still only reduce included emissions by 5%. Monitoring would still be required. On the contrary, shifting the capacity threshold would have little or no effect on the number of included plants in most member states, because capacities of installations typically far exceed the threshold level. Ecofys (2005) concludes that only the ceramics and (specialty) glass sectors and combustion installations are affected by a shift in threshold level. However, an emissions threshold increases uncertainty and requires monitoring and reporting as well and hence costs will occur. A capacity threshold creates more certainty on who is in or not. A *third* possibility could however be a combination of both possibilities to optimise advantages and minimise disadvantages of both approaches. A *fourth* option is to extend the opt-out rule into NAPs phase II, which however would necessitate changes of the Directive. Such a change would require co-decision, which unless NAPs are postponed is practically excluded.¹⁷ As some operators

¹⁶ Cost estimates vary according to depreciation periods. For example, Actal has assumed a 10-year depreciation period for investment in monitoring and reporting.

¹⁷ There is a possibility to speed up the decision making through a so-called fast-track procedure that has been used for adoption of the Linking Directive, which could be achieved within 9 months. Precondition

currently under the EU ETS have invested in monitoring, opt-out appears to be the better solution to a mandatory *de minimis* rule. A fifth and final option is to expand the scheme beyond those installations covered by the medium definition where appropriate (e.g. to address significant competitiveness concerns or to capture large emissions without adding to the regulatory burden).

3.4 New entrants, closure and transfer rules

As the Guidance document states (p. 12), “the treatment of new entrants, i.e. installations starting operation in the course of a trading period, is one of the most important design choices in any emissions trading scheme”. The reason is that as part of the allocation process, they impact on firm behaviour’s compliance strategies. The Directive leaves it to the member states on how to allocate to new entrants. Theoretically, member states could allocate for free as most have done or force new entrants to buy allowances.

Theory suggests that new installations should be forced to buy allowances. The reason is that the economic *incentives* to develop new and more carbon-efficient technologies are the same regardless of whether a new installation is given allowances for free or not. It is also argued that new installations do not carry the cost of previous investment, which was made when there was no carbon constraint (i.e. sunk costs), although this is only true as long as a new entrant is not an upgrade of an existing installation.

The main argument for allocating to new entrants for free is that this might pose a market barrier as the new entrants have costs that established operators do not have. Hence, arguments in favour of free allocation to new entrants run along the following lines:

1. Perceived fairness; if existing installations get free allowances, why should new installations not also get them, especially as they carry a price risk? If new entrants are not granted allowances on the same basis as existing market participants, price risk, particularly in an illiquid market is significant. This is heightened by the fact that a new entrants entering the market would be looking to buying its allowances from its incumbent competitor.
2. Since firms typically are constrained by capital, and capital markets are not perfect, there could be reason to subsidise capital by allocating free allowances in order to reduce the investment barrier.
3. Existing installations are overcompensated through grandfathering, which may justify subsidy of new installations. Without free allocation to new entrants, new investment in new plants is unlikely to occur.
4. Existing installations are encouraged to continue operating since allowances are withdrawn if the close. This also puts new installations at a disadvantage. Thus the justification for free allowances to new entrants becomes easier under current closure rules than if closures got to keep their allowances.
5. Equitable allocation will help to contribute limiting wholesale power price rises and help to minimise windfall profits to generators.

Hindering new entrants will actually undermine the deployment of new and more efficient technology, a key objective of climate change policy. Within the EU, new entrants have

is however that the three institutions agree, notably that the European Commission has the sole right of initiative tables a proposal, that the Presidency and the Council of Ministers as well as the EP agree to such a procedure.

especially argued that market power concentration and partly inefficiently working power markets in many EU member states or regions put new entrants in an additional disadvantage. It would not only keep inefficient plants in operation, but would keep an upward pressure on power prices as it would keep high costs producers (as marginal generator) in the market. An additional complication is that it is very difficult to distinguish between new entrants and capacity expansion. If they are not treated the same way, the result could be gaming (see Ahman & Zetterberg, 2003).

The setting up and management of new entrants' reserves have increased complexity, thereby adding costs and reducing the efficiency. The governments must decide on how to allocate, for example on the basis of expected emissions (since new entrants will have no historic emissions base) or on the basis of a benchmark. Member states must also decide what to do if more new entrants appear once the set-aside fund has been used up and conversely, what use will be made of any allowances that are left in the reserve at the end of the period. The European Commission has argued that the simplest option administratively is to make new entrants buy as it has recommended in the Guidance Document (p. 13).

That the first round of allocation has shown that special provisions for new entrants in all member states has been and is likely to remain a political priority. It is therefore realistic to propose that member states continue to allow (but not requiring) new entrant reserves. However, to avoid competitive distortions, there should be a standardised approach across member states (see Ahman et al., 2005).

Closely linked to new entrants are rules on closures, i.e. what happens if an installation that has received allowances ceases to operate. On closure, theory suggests that allowances in case of closure should not be removed as this increases the incentive to close down inefficient installations earlier as would otherwise be the case. As these installations will be replaced by more efficient new entrants, emissions would go down (see also Ahman, 2005 and Ahman et al., 2005). Conversely, withdrawing allocation upon closure equals introducing an inefficient subsidy of continued operation. This puts existing installations at an advantage compared to new entrants. Since the number of allowances that would be lost upon closures are greater for inefficient installations – assuming they have been allocated a greater number of allowances per unit of production than more efficient installations – this subsidy can in fact be very significant. Efficiency aside, some argue the opposite point. As allowances are given for free, they constitute a transfer from governments to firms. With closure, the justification for this transfer disappears. However, as allocation periods are short, in reality this impact does not extend beyond the three respective five-year allocation period. However, it has been criticised that member states attempt to extend this period by adding special transfer rules.

In practice, only two member states, i.e. the Netherlands and Sweden 'follow' the theory and allow for keeping of allowances in case of closures. As this extends only to the end of the first period, the incentive effect is likely to be small, however. In some cases member states were in favour to keep power plants running for reasons of security of supply. As to new entrants, most member states have created a new entrance reserve to be allocated for free to new entrants. Among the perceived reasons was fairness to new entrants in comparison to incumbents but also the concern with the internal market to avoid a situation whereby conditions for investment in one member state are better than in another. The lack of common rules in fact can be interpreted as leading to a 'race to the bottom' or a 'beggar-thy-neighbour' policy.

Some member states (e.g. Germany, Italy, Austria and Poland) have introduced transfer rules, saying that in case of new investment operators should be allowed to "transfer" allowances to new installation. This has a similar incentive effect as to allow keeping allowances when closing, but increases complexity and may be considered an unfair transfer from governments to

firms. As a result, they favour new installations of *incumbent* companies but not new entrants from new companies.

From this analysis emerges that it would be beneficial as a minimum to harmonise rules on new entry and closure to avoid a race to the bottom, additional complexity and hence a less efficient scheme but also to avoid gaming. There is a close link between rules on closures and new entrants and the problems with updating/ex-post adjustments. In fact, adjusting allocation upon closure can be seen as ex-post adjustment and updating in disguise. The most striking example is maybe the German NAP, where adjusting allocation to installations going below 60% of projected emissions were considered ex-post adjustment and disallowed, but installations going below 10% are considered as closures and adjustment thus allowed.

3.5 Allocation methodologies

The Directive specifies that the main method of allocation should be ‘free of charge’. The Directive does not mention ‘grandfathering’, which is allocation based on historic emissions. Indeed, Annex III of the Directive specifies a wide range of criteria for allocation, some of which require countries to take into account forward looking factors such as pathways to meet their Kyoto targets, future industry emissions trends, and industry’s ability to reduce CO₂. Free allocation can thus be based on a wide range of factors, including benchmarking approaches.

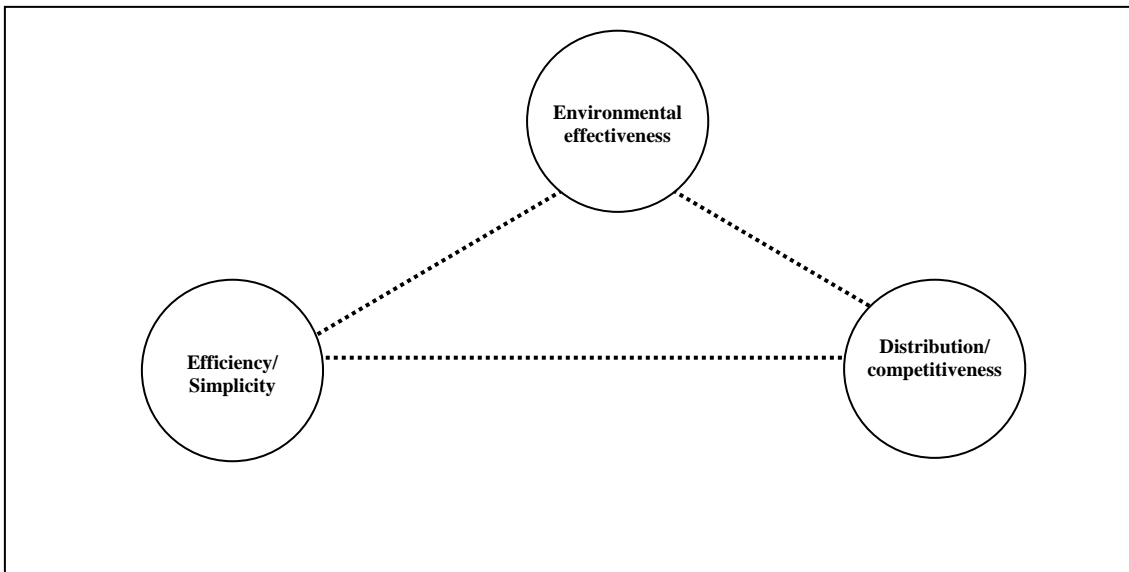
EU member states and the European Parliament, when adopting the Directive could not agree on a common methodology upon which member states should base national allocation, except that the main method of allocation should be free of charge (with some auctioning allowed). Despite guidance by the European Commission, allocation rules across member states are very different. Effects on differences have been documented. A study by Baltrel has found that the effects of differences of allocation rules for eight Baltic Sea member states cause differences in allocation of allowances in some cases in excess of a factor of four for the same installations depending on their location (Niininen, 2005). Similarly, mainly due to the stringency of the national Kyoto Protocol target, allocation to the Danish power sector has been considerably lower than to competitors, mainly in the Nordic and German markets (Hansen, 2005).

In addition to the distributive impacts of allocation methodologies¹⁸, there have been concerns that grandfathering does not provide incentives to abate. This does however not have to be the case. It is the price of CO₂ that creates the incentives for abatement. Even if allocations are provided for free, they have an opportunity cost. Companies have a choice between abating and selling the allowance, hence they have an incentive to abate if the abatement measure is cheaper than the allowance price. *Only* if however grandfathering is based on some measure that the firm can affect such as output and emissions of the previous trading period, there will be little incentive to cut emissions. If allocation is based on output, the incentives lie on increasing production rather than reducing emissions. Firms have incentives to pollute in order to get more allowances. This is sometimes referred to as updating. However, as the previous section documented, some element of updating is inherent in the ETS. Rules on closures are a (necessary) form of updating. Similarly, the change of status of a new entrant to existing installation will also mean introducing updating. On the other hand, it is true that auctioning can provide stronger signals to the covered sector through the revenue-recycle effect. But it is also well-known that auctioning has the biggest economic impacts on the covered sectors and is considered as tax-like system by industry.

¹⁸ The literature distinguished emissions-based (i.e. grandfathering, updating, auctioning) and performance or output-based (i.e. benchmarking) methodologies.

Within the legal limits of the Directive and political feasibility, member states had to strike a balance between environmental effectiveness, simplicity/efficiency and distributive impacts. Most member states tended to emphasise distributive impacts to the detriment of environmental effectiveness and simplicity and efficiency (see also Ahman & Zetterberg, 2003). Typically, however, this increases complexity. For example, the German NAP foresees 58 different possible combinations of allocation rules.

Box 1. The triangle of effectiveness-simplicity and distributive effective



Source: CEPS.

Use of benchmarking

Generally speaking ‘benchmarking’ is the process of determining what is best practice and how all other practices relate to that benchmark. It has therefore also been called performance-based as opposed to emissions-based allocation (Vanderborgh, 2005). A benchmark system could be defined as fuel, technology and/or product-specific. The benchmark or performance standard would serve as guide to allocate allowances on some sort of “fair” criteria. As allocation is linked to performance, benchmarking rewards CO₂-efficiency including investment and early action. Hence, benchmarking is principally meant as a means to address fairness and investment as it rewards performance. However, it does not always fully take into account sunk costs – as for example grandfathering does – that arise due to investment that has been made prior to the carbon constraint.

There is no inherently stronger incentive effect of benchmarking than it is for grandfathering or auctioning – see above – except if governments resort to updating. Nevertheless, benchmarking has a number of additional advantages. As benchmarks reward CO₂-efficiency and investment and are seen as such, they may enhance public support for the scheme and may be considered as more fair. In addition, once the benchmarks are established, there may be less lobbying during the allocation process although it can be assumed that the lobbying would be even fiercer during the establishment of the benchmarks, as it is not the allocation but the formulation of the benchmark that would decide upon losers and winners. Most importantly using technology- and

fuel neutral benchmarks for allocation to both existing and new installations would reduce the perverse incentives introduced by adjustments of allocation to closures and new entrants. Nevertheless, while benchmarking might be appropriate to set efficiency criteria concerning the allocation of emissions rights, the question of fixing the activity level for each installation is an open and difficult one.

In addition, benchmarking requires to process a lot of data, hence may cause an administrative burden.¹⁹ The Swedish benchmarking experience shows difficulties with data availability and other complication, such as setting boundaries of output or how to measure it. In some sectors such as steel, it appears to be very difficult to set a benchmark for an integrated mill due to the complexity of the production processes but also different legal operators. The alternative, a theoretical benchmark would be more practical but would have the disadvantage not fully reflecting the situation in each individual installation. Although over time, in line with the Sevilla process on BAT, it should be thinkable to move towards benchmarks.

There have been many member states that used benchmarks in their phase I NAPs. Some member states (e.g. Germany, Denmark and Finland) have used benchmarks for allocation to new entrants, and some (e.g. Sweden, Netherlands, Italy) used benchmarks for some installations and /or fixed energy efficiency rates for energy production installations. While such approaches are covered by the Directive, the problem is that the metrics differ between member states. For instance, some member states base allocation on installed capacity and projected utilisation rates, some on projected output and others still on BAT. Hence, a first step towards progress on benchmarks would be coordination across member states to avoid inconsistencies.

There are some potential additional merits of benchmarks that could be further examined. For example, they could be used by member states as an instrument to compare different allocations in member states. More important possibly, benchmarks could become an instrument to establish long-term energy efficiency targets upon which to base a long-term cap for the *manufacturing industry*. The absence of a long-term cap as a result of the short allocation periods is generally seen within industry as a deterrent for new investment. In the long term, the EU ETS must, however, encourage investment in lower-carbon generation technologies, if the climate change challenge is to be met. Analyses of IEA (2003, 2004), Mc Kinsey (2003) and CEPS (Egenhofer, Fujiwara & Gialoglou 2005 for a review) have shown, it is highly likely that in this initial stage the EU ETS will add to investment uncertainty in the covered sectors with new investment being deferred. This and the design of a benchmarking-based system (e.g. fuel, technology and or/product specific) will also be discussed in the follow-up CEPS report to be published in September/October 2005.

Auctioning

Auctioning is allowed in the EU ETS, to a limited extent. 5% of the total quantity allocated in each country may be auctioned for the first phase of the scheme, and 10% for the second phase. While only Denmark, Hungary, Lithuania and Ireland have or will use auctioning in NAPs phase I, several member states have indicated to make more extensive use of auctioning in NAP phase II.²⁰ It is therefore highly likely that allocation methodologies including benchmarking and auctioning will become a central issue of 2006 review. As this report concentrates on short-term review issues, i.e. NAP phase II, the analysis presented here will focus on issues that are

¹⁹ DEFRA (UK) has set up an international working group pulling together existing expertise, to coordinate research across Europe and to examine feasibility for phase II in addition to a consulting contract to research benchmarking options.

²⁰ The Association of Danish Energy Companies (Dansk Energi) has publicly announced their support for auctioning (Hansen 2005). Auctioning is generally also supported by environmental NGOs.

relevant in this context. A more in-depth analysis on allocation methodologies will be presented in the follow-up CEPS report in September/October of this year.

The main issues related to auctioning is likely to be the impact on costs and resulting effects on competitiveness (i.e. profits, market share) for the energy-intensive industries, whose competitors are not subject to a similar carbon constraint, a “secondary allocation” debate on how to recycle revenues as well as open questions on the mechanics of auctioning for those member states that want to use it. In order to avoid competitive distortions, fragmentation of the internal market or price shocks to the market, it is important that auctioning is undertaken in a co-ordinated way by the member states concerned. Of particular importance is transparency and particularly information on total numbers to be auctioned, timing, eligibility criteria for participation such as credit worthiness and the rules for revenue recycling. Member states should also be aware that auctioning may spark price spikes. The European Commission has indicated to provide guidance on these issues.

3.6 Expansion through unilateral “opt-ins”

The EU ETS explicitly allows for more GHGs to be included in the EU ETS. This will be part of the formal 2006 Review. At the same time, under Art. 24 of the EU ETS Directive, there is a possibility for member states to unilaterally include additional GHGs, subject to European Commission approval based on both economic and environmental objectives such as potential effects on the internal market, distortions to competition, environmental integrity and reliability of the planned monitoring and reporting system. The rationale for including non-CO₂ GHGs is both environmental and economic (see Box 2). Inclusion of new gases can offer major environmental and economic benefits such as covering more sources or potentially lower compliance costs if marginal costs in the trading sector are higher than in the installations to be opted-in.

Box 2. Efficiency gains of a multi-gas strategy

Including additional gases increases the variety of reduction options, offers additional innovation potentials if innovation lead times are respected and increases liquidity and ultimately the efficiency of the market. Precondition are however effective monitoring and that inclusion achieves real reductions, for example beyond business-as-usual. According to Capros et al. (2000), a ‘6-gas strategy’ approach for the EU ETS could decrease the allowance price by more than a third from the current price level. According to this estimate, the EU ETS allowance price for one tonne of CO₂ equivalent could be reduced from €33/tCO₂ with CO₂ only to €20/tCO₂ with six gases only to reach the EU’s Kyoto target, i.e. 8% reduction in GHG emissions. Although estimates about efficiency gains remain controversial for example depending on the translation of Global Warming Potentials (GWP) (e.g. Aaheim et al., 2004), there is an acknowledgment that multi-gas trading is generally more efficient, i.e. it reduces compliance costs (e.g. Hyman et al., 2002; Kets, 2002). As Reilly et al. (2004) argue, as non-CO₂ GHG emission reductions do not exhibit high cost differentials across regions as those in CO₂ emissions would, it might be even easier to develop global strategies for reductions in non-CO₂ GHG emissions than those for CO₂ emission reductions only.

Among the reasons for limiting the ETS to CO₂ emissions only have been the willingness to keep the EU ETS initially as simple as possible but also the belief that the other non-CO₂ gases are difficult to monitor with comparable accuracy. This contrasts with the UK scheme and the initially proposed Norwegian scheme, both of which cover all six GHGs. The internal BP scheme covers CO₂ and methane. France has introduced a N₂O tax, assuming that this gas can be accurately measured. Thus, there seem to be no structural issues related to measuring and monitoring of at least some non-CO₂ GHGs. In fact the problem seems to be a lack of capacity

in some member states. Moreover the Commission's and member states' caution was driven by a lack of reliable information on the use of additional gases.

While the issue of new gases will be dealt with in the formal 2006 review, there may be a case for unilateral opt-ins under Art. 24. Member states should examine the possibility of unilateral opt-ins, if there are clear economic and environmental benefits, including notably that monitoring and reporting are ensured. Another precondition is that opt-ins do not disproportionately increase the complexity of the scheme, i.e. that transaction costs outweigh the environmental and economic benefit. This could for example be achieved by the de minimis rule for installations. In order to avoid that different member states apply different de minimis rules, all member states that wish to opt-in should co-ordinate the definition of thresholds. Otherwise, there is a risk of different rules applying across the EU, leading to distortions to competition or gaming. Another area for transaction costs have been the drawing up of monitoring guidelines. Industrial stakeholders have made the case that early industry-involvement is beneficial to ensure that guidelines are practical and easy to implement.

Further expansion of the system on a step by step basis is desirable to seek out the most cost-effective abatement opportunities under the scheme. N₂O emissions from nitric acid plants appear to offer a particular opportunity in this direction. The European Fertilizer Manufacturing Industry (EFMA) has publicly announced to wish being included in the EU ETS. It claims that the EU ETS would double the cost-effective reduction potential by 2010 if compared by regulation under the IPPC Directive. As nitric acid plants account for about 10% of total EU GHG emissions from industrial processes (i.e. 40 million tons of CO₂-e), such reduction potentials are relevant and may lend themselves to opt-ins.

4. Monitoring, reporting and verification

Any emissions trading scheme depends on consistent and transparent monitoring, reporting and verification (MRV) as well as efficient registries. Article 14 in the EU ETS Directive requires the European Commission to adopt Guidelines for monitoring and reporting of emissions, based on a set of principles such as accuracy, timeliness and integrity, set out in Annex IV of the Directive. The framework on monitoring and reporting is completed by verification (sometimes also called certification) and a registry. Verification ensures correctness and accuracy which is necessary for the trust in the market as even moderate margins of error impact the economic value and environmental integrity. The Directive requires verified data in accordance with a number of criteria set out in Annex V of the Directive, such as the quality and accuracy of the measuring equipment, effective data management systems, transparency of processes and public access to data. The registry is the tool to assess compliance within the trading scheme by comparing the emissions of the installation to the number of allowances the installations holds, i.e. tracking of allowances.

Effective implementation of MRV rules is a precondition for the EU ETS to work²¹, central to provide trust in the system as well as it offers major potentials to increase efficiency by bringing down transaction costs. That monitoring and reporting carry the risk of incurring high transaction costs as has notably been demonstrated for US trading schemes such as the SO₂ trading and the OTC NO_x Budget Trading Programmes (e.g. Mangis, 1998; Holmstead, 2002; for an overview see Egenhofer and Fujiwara 2003). Arguably, for the US acid rain programme and the OTC NO_x Budget Trading Programme, measuring and monitoring have been the most complex and costly element components of the trading scheme, although the situation is

²¹ All three objectives of the EU ETS, environmental effectiveness, economic efficiency and fairness depend on proper functioning of MRV.

somewhat different in the case of greenhouse gas (GHG) emissions, which are in most cases not actually measured but calculated e.g. based on energy use or other proxies. The Monitoring and Reporting Guideline is, in some instances not practical leading to transaction costs that could be avoided. An example is the requirement to use ISO 17025 accredited laboratories which have limited availability. Another important cost factor is the obligation to monitor according to the highest tiers.

Implementation

Within the EU ETS, the major issue is effective and consistent implementation of MRV across member states. An example of inefficiency leading to increased transaction costs and high risk of inconsistency is the lack of uniform verification criteria and in particular the very divergent processes of accrediting verifiers. These processes differ not only between the 25 member states but in some member states they are either conducted or repeated on Regional levels such as in Belgium and Spain. This drives cost and reduces transparency for international companies wishing to apply uniform M&R procedures and one verifier throughout EU. Conversely, for international verifiers wishing to serve their international customers it can mean up to between 40 and 50 accreditations to different schemes with increased cost and reduced availability of verifiers in the market. An example of divergence in application of the Directive and the MRV is the current proposal in France to apply less frequent verifications with larger margins of error as a clear consequence. This raises difficulties for the European Commission to ensure effective, consistent and reliable implementation. Such a plethora of different rules and procedures increases costs for ETS participants, which have to deal with a variety of different – often inconsistent – rules. Ultimately, both lack of effective implementation and differences in rules and procedures may undermine trust in the system from a financial and environmental point of view. The Commission’s idea to organise member states seminars to discuss how to harmonise monitoring and reporting requirements should be supported.

In a long-term and global perspective establishing “common metrics” (i.e. benchmarks for monitoring and reporting) will be essential for a global emissions markets, should that become reality. Some global standards have been emerging as the GHG Protocol by the World Resources Institute and the WBCSD, the Global GHG Registry hosted by the World Economic Forum, and the soon-to-be completed ISO standards 14064. In order to minimise the risk of proliferation of national, regional and/or sectoral protocols, it is important that at least within the EU ETS, there is a common and unified MRV framework.

Verification

It is especially the case in verification, where efficiency gains are possible. Minimum competency requirements for the verifier as a criterion for verification (item 12, Annex V of the Directive) allow for a wide interpretation of what an adequate *verification process* is, how and by whom it should be *accredited*, and how it should be managed and controlled. Both rules for verification and accreditation are left to the discretion of member states to a large extent.

In principle, the EU could establish a common accreditation body that is responsible for accreditation of verifiers on an EU-wide basis. This would have obvious advantages related to the environmental integrity and the uniformity of accreditation within the EU. This would have equal advantages internationally since this would be fully in line with UNFCCC for the CDM, thereby reducing the transaction costs of a company investing abroad. The feasibility of creating a common EU accreditation body as a real political option is unclear but remains unlikely unless the Commission takes a strong lead on this.

The more likely possibility is that different member states will continue to follow different procedures regarding both the process of verification and the accreditation of verifiers. On the one hand this might raise transaction costs due to different procedures that operators have to follow throughout different member states in the internal market. On the other hand, this allows for testing different approaches among member states and taking account of national circumstances, which can be beneficial, provided that ultimately a unified systems comes into operation.

There is some harmonisation occurring through the application of the European Co-operation for Accreditation's *Guidance for Recognition of Verification Bodies under EU ETS Directive*. Many member states are looking to use this document as the basis for setting up accreditation schemes for verification bodies, particularly those that are members of the EA. Verification checks should be as consistent as possible, but there may be some variations in roles and responsibilities that will exist because of local or historical legislation and experience. It is also important to keep in mind to reduce the burden for small installations.

If harmonisation of rules at EU level both for certification as well as certifier-accreditation is not possible, as a minimum, accreditation bodies in all EU member states would follow similar rules for accreditation (to reduce transaction costs). Some member states are already allowing mutual recognition, but may still carry out some form of surveillance of verification bodies when they work in another member states for the first time (e.g. UKAS) Ultimately, such an approach could allow for "mutual recognition" of accredited bodies from one EU member state to another. The association of European Accreditation Bodies has attempted to create the basis for mutual recognition between some member states but this initiative has so far failed due to non essential additional requirements in most member states. Member states should support mutual recognition provided verification body is accredited according to the European Co-operation for Accreditation Guidance on Accreditation and they perform the verification in line with relevant government's guidance on verification.

5. Concluding remarks

This report has essentially dealt with a number of important issues such as transparency of NAPs, definitions, small installations, allocation methodologies, opt-ins or monitoring, reporting and verification and to a lesser extent with market development. While addressing short-term implementation issues is necessary for effective implementation of the EU ETS – including its economic efficiency and viability – on their own they are not sufficient. The EU ETS has raised a number of more deep-seated issues including economic impacts, lack of certainty and its effects on investment and the possible extension to aviation. These issues are at the interface of NAP phase II and the long-term formal 2006 review. Hence, they will be analysed in a follow-up report to be completed in December or early 2006.

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Appendix 1

Criteria for National Allocation Plans in Annex III of the EU ETS Directive*

1. The total quantity of allowances to be allocated for the relevant period shall be consistent with the Member State's obligation to limit its emissions pursuant to Decision 2002/358/EC and the Kyoto Protocol, taking into account, on the one hand, the proportion of overall emissions that these allowances represent in comparison with emissions from sources not covered by this Directive and, on the other hand, national energy policies, and should be consistent with the national climate change programme. The total quantity of allowances to be allocated shall not be more than is likely to be needed for the strict application of the criteria of this Annex. Prior to 2008, the quantity shall be consistent with a path towards achieving or over-achieving each Member State's target under Decision 2002/358/ EC and the Kyoto Protocol.
2. The total quantity of allowances to be allocated shall be consistent with assessments of actual and projected progress towards fulfilling the Member States' contributions to the Community's commitments made pursuant to Decision 93/389/EEC.
3. Quantities of allowances to be allocated shall be consistent with the potential, including the technological potential, of activities covered by this scheme to reduce emissions. Member States may base their distribution of allowances on average emissions of greenhouse gases by product in each activity and achievable progress in each activity.
4. The plan shall be consistent with other Community legislative and policy instruments. Account should be taken of unavoidable increases in emissions resulting from new legislative requirements.
5. The plan shall not discriminate between companies or sectors in such a way as to unduly favour certain undertakings or activities in accordance with the requirements of the Treaty, in particular Articles 87 and 88 thereof.
6. The plan shall contain information on the manner in which new entrants will be able to begin participating in the Community scheme in the Member State concerned.
7. The plan may accommodate early action and shall contain information on the manner in which early action is taken into account. Benchmarks derived from reference documents concerning the best available technologies may be employed by Member States in developing their National Allocation Plans, and these benchmarks can incorporate an element of accommodating early action.
8. The plan shall contain information on the manner in which clean technology, including energy efficient technologies, are taken into account.
9. The plan shall include provisions for comments to be expressed by the public, and contain information on the arrangements by which due account will be taken of these comments before a decision on the allocation of allowances is taken.
10. The plan shall contain a list of the installations covered by this Directive with the quantities of allowances intended to be allocated to each.
11. The plan may contain information on the manner in which the existence of competition from countries or entities outside the Union will be taken into account.

* Directive 2003/87/EC, Official Journal of the European Union, 25 October 2003), p. 43.

Appendix 2

Criteria for Verification Referred to in Article 15 EU ETS Directive

General Principles

1. Emissions from each activity listed in Annex I shall be subject to verification.
2. The verification process shall include consideration of the report pursuant to Article 14(3) and of monitoring during the preceding year. It shall address the reliability, credibility and accuracy of monitoring systems and the reported data and information relating to emissions, in particular:
 - (a) the reported activity data and related measurements and calculations;
 - (b) the choice and the employment of emission factors;
 - (c) the calculations leading to the determination of the overall emissions; and
 - (d) if measurement is used, the appropriateness of the choice and the employment of measuring methods.
3. Reported emissions may only be validated if reliable and credible data and information allow the emissions to be determined with a high degree of certainty. A high degree of certainty requires the operator to show that:
 - (a) the reported data is free of inconsistencies;
 - (b) the collection of the data has been carried out in accordance with the applicable scientific standards; and
 - (c) the relevant records of the installation are complete and consistent.
4. The verifier shall be given access to all sites and information in relation to the subject of the verification.
5. The verifier shall take into account whether the installation is registered under the Community eco-management and audit scheme (EMAS).

Methodology

Strategic analysis

6. The verification shall be based on a strategic analysis of all the activities carried out in the installation. This requires the verifier to have an overview of all the activities and their significance for emissions.

Process analysis

7. The verification of the information submitted shall, where appropriate, be carried out on the site of the installation. The verifier shall use spot-checks to determine the reliability of the reported data and information.

Risk analysis

8. The verifier shall submit all the sources of emissions in the installation to an evaluation with regard to the reliability of the data of each source contributing to the overall emissions of the installation.

9. On the basis of this analysis the verifier shall explicitly identify those sources with a high risk of error and other aspects of the monitoring and reporting procedure which are likely to contribute to errors in the determination of the overall emissions. This especially involves the choice of the emission factors and the calculations necessary to determine the level of the emissions from individual sources. Particular attention shall be given to those sources with a high risk of error and the abovementioned aspects of the monitoring procedure.
10. The verifier shall take into consideration any effective risk control methods applied by the operator with a view to minimising the degree of uncertainty.

Report

11. The verifier shall prepare a report on the validation process stating whether the report pursuant to Article 14(3) is satisfactory. This report shall specify all issues relevant to the work carried out. A statement that the report pursuant to Article 14(3) is satisfactory may be made if, in the opinion of the verifier, the total emissions are not materially misstated.

Minimum competency requirements for the verifier

12. The verifier shall be independent of the operator, carry out his activities in a sound and objective professional manner, and understand:
 - (a) the provisions of this Directive, as well as relevant standards and guidance adopted by the Commission pursuant to Article 14(1);
 - (b) the legislative, regulatory, and administrative requirements relevant to the activities being verified; and
 - (c) the generation of all information related to each source of emissions in the installation, in particular, relating to the collection, measurement, calculation and reporting of data.

Appendix 3

List of Task Force Members and Invited Guests and Speakers

Co-Chairmen: David Hone
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Sonia Casino Diaz
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European Policy Analyst
Centrica plc

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Energy Policy
Confederation of Danish Industries (DI)

Wiel Klerken
VNO-NCW (Confederation of Netherlands
Industry & Employers)

Bill Kyte
Head
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Shell Deutschland Oil GmbH

Joachim Löchte
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ENEL SpA

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Clifford Chance LLP

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Director of the Research Project
The Role of Emissions Trading in Climate
Swedish Environmental Research Institute

Chris Allen
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