

THE APPROACH TO NEW ENTRANTS AND CLOSURES IN THE EU ETS

Report under the project
“Review of EU Emissions Trading Scheme”



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1 INTRODUCTION

The EU Emissions Trading Scheme (EU ETS) was launched in January 2005. It is the largest cap-and-trade scheme in the world and the core instrument for Kyoto compliance in the EU. This first environmental market established in the EU involves thousands of operators who have obligations for limiting the carbon dioxide emissions from their plants. In an average week more than 10 million allowances are traded, resulting in a market worth several billion Euro already in the first year of operation.

Article 30 of the Directive implementing the EU ETS requires the Commission to review the application of the EU Emissions Trading Scheme and report to the European Parliament and to the Council. The report may be accompanied by proposals for amendments to the scheme.

The European Commission's DG Environment appointed McKinsey & Company and Ecofys to support it in developing the review. Amongst other things, they were asked to develop an understanding of the impact of the scheme on the competitive position of participants and to analyse possibilities for the design of the scheme after the second trading period.

Their work deals with a number of the issues listed in Article 30 as ones that should be addressed in the Commission's report, as well as other relevant issues. Each report discusses approaches taken in the first phase and important lessons learnt. The analyses focus on the post-2012 design. For each design element, future options are investigated. This involves discussion of the advantages and disadvantages of design options, harmonization opportunities, and impact on competitiveness.

The work conducted in the period June 2005–July 2006 consists of a web survey to consult stakeholders on their views on the EU ETS, as well as extensive topical analyses.

This report reflects the views of McKinsey & Company and of Ecofys and does not constitute official views or policy of the European Commission.

Other reports delivered in the scope of this work are available at http://ec.europa.eu/environment/climat/emission/review_EN.htm.

2 Summary

This paper focuses on new entrant, closure and transfer rules, on the basis of issues identified in the first phase of the mid-term review project that resulted from the different elaboration of these rules across the EU-25.

The report begins by setting out the background in relation to new entrants and the EU ETS and identifies the various elements of the new entrant and closure rules. The new entrant elements are:

- Definition of new entrant;
- The presence of a new entrant reserve of free allowances, or no reserve;
- The definition and treatment of known new entrants;
- The size of the reserve, the structure of the reserve;
- The calculation of allowances at installation level and the provision of bonuses;
- The procedure for accessing the reserve;
- How to deal with any surplus in the reserve, or a deficit.

In terms of closure the issues covered in this report were:

- The definition of closure;
- If and when to remove allowances from closed installations;
- Transfer rules;
- The length of the allocation period.

An overview of the way in which different Member States tackled these issues in the first phase of the EU ETS follows. Using this variety of approaches as a backdrop, the report proceeds to analyse the implications that different approaches to the new entrant, closure and transfer rules can have on competition between new entrants and incumbents, between Member States and between EU and non-EU countries. The same analysis is then carried out to look at the ways in which these rules can be used to influence the uptake of clean technologies.

Having thus considered competition and clean technology implications of the rules, design options are investigated. Firstly, the advantages and disadvantages of having a reserve of free allowances for new entrants is set out, the alternatives of auctioning or buying allowances on the open market are also explored. The paper then goes on to look at the different approaches to closure that can be taken in the light of new entrant rules – should closure rules mirror those of new entrants, or should there be no closure rules at all?

The final section of this report looks at harmonisation opportunities, setting out the pros and cons of harmonising each of the new entrant and closure rule elements, and then setting out options that the Commission might choose to take, including the following broad categories:

- No further harmonisation;
- Harmonisation of the general approach to new entrant and closure rules;
- Harmonisation of general allocation methodologies;
- Harmonisation of the new entrant reserve, with the potential of creating an EU-wide reserve also investigated.

Overall, the paper highlights a wide range of issues and is intended as a guide for policy-makers illustrating the different ways in which new entrant and closure rules can impact the economy. It should be noted that this review would be helpfully supplemented by a review, at the end of the first phase, of experiences that Member States have had in the operation of their new entrant reserves. Such a review would identify which of these issues pose the greatest problems in reality and would be able to help guide the identification of best practice.

The paper concludes that the EU has a choice about the level at which to harmonise new entrant rules and provisions. The case presented here shows strong arguments in favour of harmonising certain elements of the approach and allocation to installations post-2012.

Harmonisation rules that relate to new entrants must be taken in tandem with harmonisation of other EU ETS rules relating to incumbents to ensure equality of treatment. Furthermore, harmonisation decisions must be taken bearing in mind the principles of achieving a lower carbon economy with minimal disruption to competition.



3 Background

This section looks generally at the role and effects of the inclusion of new entrant and closure rules within the first phase of the EU ETS, setting out the issues to be investigated in the paper.

3.1 Background

The EU ETS is a cap and trade system, designed to limit the overall carbon dioxide emissions¹ within the EU-25 Member States within certain designated sectors. Directive 2003/87/EC, by which the EU ETS is set up, allows member states a degree of autonomy in drafting their National Allocation Plans (NAPs). These NAPs set out the mechanism by which the cap for the Member State was determined and apportioned to installations. The NAPs also described some of the assumptions behind these calculations and decisions.

In the first phase of the EU ETS, incumbent² installations have been allocated a number of allowances in the NAPs to cover (part of) their emissions. However, competition legislation requires that the market in the EU and its Member States has to be accessible to new companies that want to enter the market. If such a new entrant would not be able to acquire allowances to cover its emissions, this would constitute a market barrier in violation of competition laws.

New entrants to a sector represent only one of the changes that occur within the life cycle of industry. The following section investigates how changes in industry need to be considered within the EU ETS policy.

3.2 The life cycle of industry

The application of the EU ETS in individual Member States has been carried out at two levels – the formulation of the NAP i.e. the approach to allocation of allowances to installations, and the development of an

¹ The system has been limited to carbon dioxide in the first phase of the scheme but might be expanded to other gases in future phases.

² For the purposes of this report, the distinction of new entrant and incumbent refers to new assets and existing assets respectively. This terminology does not distinguish between new and incumbent market players at the level of companies etc.

installation list i.e. the application of that approach to the installations in operation at the time of writing the NAP.

The installation list is therefore a snapshot of a situation and does not account for any changes in the shape of industry over time. Changes on the growth side include:

- investments in new installations;
- expansions to installations;
- increased utilisation of existing capacity.

And changes relating to reduced or altered production patterns include:

- full and permanent closure of an installation;
- temporary closure;
- partial closure (both permanent and temporary);
- reduced utilisation of existing capacity

By applying the principles set out in the NAPs to new installations, extensions, closures or transfers these changes can be captured. However, the rules that exist at present are not consistent across all Member States, and also do not cover all the possible situations where the installation's status, from an operators' perspective, might change. Such an example would be the increased use of existing capacity, relevant to a plant operator and emissions, but not accounted for in the installation list and allocations because increased use of existing capacity is never considered a new entrant. Furthermore, even where the appropriate rules do cover changes from the operators' perspective, the lack of consistency of approach on these issues across member states may create a distortion in the market.

The follow sections look more closely at the existence of new entry, closure and transfer rules within the first phase of the EU ETS.

3.3 The Directive and Guidance

New entrants

The requirement for Member States to take treatment of new entrants into account in the EU emissions trading scheme is included in Article 11 of the Directive covering the allocation and issue of allowances.

Paragraph 3 states that decisions on allocation "shall be in accordance with the requirements of the Treaty, in particular Articles 87 and 88 thereof. When deciding upon allocation, Member States shall take into account the need to provide access to allowances for new entrants."

It was not prescribed how this must be done; this is left to the Member States. The only further directions are given in Annex III of the Directive

stating requirements for the National Allocation Plans: "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." Note that the Directive speaks of "the need to provide access to allowances" rather than the "need to provide allowances". This means that access can also be provided by requiring new entrants to buy allowances, e.g. in an auction or on the market.

The Commission Guidance for the preparation of NAPs for the second phase of the scheme³ reserves judgement on a best practice approach for new entrants and closures until later in the scheme. However, this second Guidance document does make statements about certain aspects of Member States' NAPII provisions, namely:

Recommending that the new entrants reserve not be replenished upon exhaustion; and

That there be no allocation at projected needs to new installation.

The Commission also stated that it is considering alternative options to the individual NERs, such as an EU-level new entrants reserve for future phases.

New entrants in the context of the EU ETS are defined in Article 3 of the Directive as "any installation carrying out one or more of the activities indicated in Annex I, which has obtained a greenhouse gas emissions permit or an update of its greenhouse gas emissions permit because of a change in the nature or functioning or an extension of the installation, subsequent to the notification to the Commission of the national allocation plan." Note that this definition covers an increase in production capacity at an existing installation if a physical extension of the installation is involved. An increase in production through a higher utilisation of existing capacity is not considered to constitute a new entrant.⁴

Closure and Transfer

Although both the Directive and the first accompanying communication providing guidance to its implementation contain a great deal of information about the approach to new entrants, there is no discussion of closures or transfer rules.

³ Communication from the Commission "Further guidance on allocation plans for the 2008 to 2012 trading period of the EU Emission Trading Scheme" COM(2005)703 final 22.12.05, Annex 7.

⁴ 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 7.1.2004 Paragraph 50.

The basic questions relating to closure are how to define ownership of allowances received to cover emissions after closure, and how to define a closure for such purposes. Transfer rules are a special type of closure rules that have been defined by several Member States in the first phase of the EU ETS. Transfer rules enable a closing plant to retain allowances where production is being transferred to a new installation or an extension of an installation that carries out the same process (within one Member State).

Looking at closures, there is no specific statement in the Directive that calls for the removal of allowances on closure. The combination of an installation list and provisions for new entrants could imply a need to make provisions for closures to ensure that the installation list continues to reflect the genuine participants in the scheme (i.e. those that have to relinquish allowances for their emissions at the end of each year).

It is particularly important for NAPs to deal with closure as the overall cap, including the new entrant provisions, has to be set out in the NAP. If there is no provision for returning allowances to a new entrants reserve on closure, there could be a shortfall in allowances available to the overall pool of participants where an operator ceases to exist and therefore cannot sell the allowances intended for the years after the year of closure. Where an operator of a closing installation does sell the allowances, they would remain available to other participants, but at a cost, while the closed installation makes a profit. This profit could be interpreted as a windfall profit that is the direct result of a government grant received on the basis of expected emissions (i.e. based on need) yet used for a different purpose entirely, unless closure is considered a legitimate abatement option instead.

In drafting the first phase NAPs several countries have included transfer provisions in order to make allowances for some of the life-cycle changes that might occur in a company with several production facilities. However, the fact that this issue was only tackled in some Member States needs investigation in the context of an EU-wide scheme.

The Commission guidance for the second phase³ does make reference to the range of transfer and closure provisions that occurred in the first phase NAPs. Through this document the Commission recommends that allowances not allocated to closed installations should be cancelled or auctioned, and makes further reference to Commission work investigating the possibility of EU-wide rules on cross-border transfer. This Guidance alludes to the potential of such EU-wide rules to achieve greater harmonisation of both new entrant and closure provisions.

The temporary nature of new entrants and closures

The status of new entrants and closures is limited and only relates to one trading period. In phase II of the scheme the installation list will be updated such that many of⁵ the new entrants from the first phase will be considered incumbents in the second phase and closed installations will no longer be part of the scheme.

It is important to consciously tackle the transition of the new entrant installations, and indeed recipients of transferred allowances, to the incumbent category of installations. The move to incumbent status could result in a differing allocation of allowances if e.g. new entrants are allocated on a benchmarked basis, but incumbents using a historical emissions approach. A change in the structure of allocation will make a difference to the long-term signals that are sent to investors in new plants in relation to the potential cost of carbon. These problems are removed by the provision of one common allocation methodology across the board e.g. no free allocation to any involved, benchmarks used for all etc.

Post-2012 it is possible to take an alternative approach – and no longer amalgamate new entrants with incumbents. In such a scenario a member state may maintain two lists in the future – one for incumbents up to the start of phase II, and one for “new entrants” from this point forward. It would be expected that the incumbent list would gradually get smaller in size, whilst the new list would eventually become the total group of participants. The advantage of such an approach is that a transition is enabled from using a historical emissions approach for incumbents to a new approach that will apply to incumbents in the future and new entrants in the future. However, such an approach may be considered unnecessarily complex.

It should also be noted that closed installations may come on stream again in the future. Decisions need to be made about whether there are any special provisions made for such temporary closures – whether foreseen or not.

3.4 Elements of new entrant and closure rules

As a result of the industry life cycle and legislative elements discussed in chapters 3.2 and 3.3 the following important elements of new entrant

⁵ There will be a large number of new entrant installations that will be permitted after the notification deadline for NAPs (June 2006) and before the start of operation of phase II of the scheme (January 2008). As a result many new entrants in the first phase may have to continue to be new entrants in the second phase.

and closure rules have been identified. These elements are listed in this section with a brief definition:

New entrants:

Definition of new entrant: eligibility by type of installation, thresholds for eligibility, timing of start date to define boundary of incumbent/new entrant;

New entrant reserve of free allowances, or no reserve and auctioning or purchase on open market;

Definition and treatment of known new entrants: identification and treatment of new entrants that have established plans at time of drafting the NAP;

The size of the reserve: How large is the provision for new entrants, how is this determined, this could be the free reserve or an amount set aside for auction intended to be available for new entrants (amongst others);

The structure of the reserve: is the free reserve divided annually, (un)equal portions, ring-fenced for different purposes e.g. CHP;

Calculating allowances at installation level: Methodology for allocating free allowances to individual new entrants;

Provision of bonuses: free allowances to new entrants on the basis of the technology used e.g. for CHP, not specifically for new entrants may also be for incumbents.

Procedure for accessing the reserve: Administrative process for first-come, first-served approach and verification, if any;

Surplus in the reserve: If there are excess allowances in the reserve at the end of a trading period are they cancelled, auctioned or banked for the next period⁶;

Deficit in the reserve: If the reserve runs out are later applicants asked to buy allowances on the market, or are further provisions made by the government;

Closures:

Definition of closure: What constitutes a closure, how to deal with temporary or partial closures, is there a threshold of activity below which closure is assumed;

How and when to remove allowances from closed installations: Are allowances allocated to an installation removed on closure?;

Transfers: Transferring allowances from closing installations to other new/existing installations in the same/different Member State carrying out the same technical activity;

⁶ Note that banking between phases is mandatory post-2012 and at that point Member States will be able to carry forward unused reserve allowances.

Length of certainty over these decisions: length of the allocation period, likely to be comparable to that for incumbents, and the lead time given between the decision and putting it into place.

In developing NAPs for the first phase, different Member States addressed these issues in different ways, there was no single approach chosen. There were several reasons for the variety of approaches. Firstly, different principles needed to be balanced in the choice of approach and secondly, the freedom each country was given to devise the rules meant that some came up with different solutions to the same problems or concerns.

3.5 Principles of the EU ETS and new entrant and closure

The different approaches taken to new entrants and closures need to be seen within the context of the principles behind the decisions taken. The EU ETS has been set up to control greenhouse gas emissions. The stringency of the cap is intended to encourage the uptake of clean technologies within the sectors covered by the scheme. It is important to note that the EU ETS is intended to be technology blind, so although the overall creation of a carbon market should incentivise low carbon technology, the system should allow different technologies and low carbon approaches to compete with each other. Furthermore, encouraging the uptake of clean technologies does not necessarily mean that the system should incorporate extra bonuses above and beyond the market mechanisms created through the EU ETS, even where there are additional barriers.

The use of a market-based mechanism ought to provide a price signal for carbon and the flexibility, through trading, for investments in cleaner technology to be made at the lowest cost across the sector. As a result, the greatest change in emissions can be made with the lowest impact on competitiveness. The system is intended to favour carbon-extensive approaches over the carbon-intensive ones, and so competition effects are expected to a certain degree as the cost of carbon is increasingly incorporated into operations.

The new entrant, closure and transfer provisions have been devised by countries in order to reduce competitiveness concerns that occur at various phases of the life cycle of industry – as outlined in section 3.2.

It has been the Commission's role to assess the NAP devised by each country in order to ensure, in as much as possible, that the approaches

taken in each country to the NAPs in general, including new entrant rules, does not distort competition in the internal market.

Some of the new entrant and closure rules have a role to play in incentivising clean technology. It is important that in making decisions about these rules the priorities of incentivising clean technology, in a technology blind manner, and limiting the competition effects are balanced. Achieving this careful balance, also includes ensuring that the rules do not promote or protect less clean technologies. Business priorities must also be considered in drafting rules on new entrant and closure – the rules must take into account the way business processes work, and seek to operate within the same structure and timetable, providing industry with the intended signals in a timely manner.

The next section looks at the interpretation of the new entrant and closure rules by different Member States, and the issues that these interpretations raise.



4 INTERPRETATION BY MEMBER STATES

This section sets out the ways in which the new entrant, closure and transfer provisions have been made by countries in the first phase of the scheme.⁷ These tables serve to illustrate the variety of approaches that have been taken, with the analysis of issues in the following chapter. These tables can also serve as reference points as future policies are developed.

It is important to note that although the broad policy approaches are set out in these tables, many of the important differences relating to signals to investors, the overall signals and incentives for moving to clean technology, and the impacts on competition will relate to the details of the rules. In most cases Member States have not elaborated these in the NAPs, and in some cases it is likely that some situations might only be solved on a case-by-case basis.

It will therefore be extremely important to look at experiences in Member States during and after the first phase of the scheme – this will be important to test the theories in terms of impacts of different policy approaches on competition and clean technology. Assessments of experiences in the first phase will enable the Commission to identify best practice.

4.1 New entrants

As discussed earlier, the EU ETS Directive does not prescribe how new entrants' access to the market has to be provided. However, the guidance document provides three choices: asking the installations to buy their allowances on the open market, auctioning allowances in a way that is open to such operators, or providing them free of charge in a reserve. All Member States have opted for setting aside a number of allowances in a so-called New Entrants Reserve (NER). In all cases in the first phase, the allowances are provided to new entrants for free for at least a portion of the allowances – some countries will also be having auctions which will be open to new entrants and others.

⁷ This information is mostly based on the NAPs that were notified to the Commission. In some cases changes have been made on the basis of the Commission decisions. Those changes included in NAPs published on the Commission website have been included in the tables.

The size and structure of the NER

In the first phase NAPs the initial size of the NER varied greatly, the range of NER sizes is shown in the table below. The variety of sizes can reflect the difference in growth expectations in different countries, the different burden placed on incumbents versus new growth, or the relatively small size of the country (e.g. Malta, Latvia, and Luxemburg).

Other decisions taken by a member state can further influence the size of the reserve. In countries where a transfer rule exists, the new entrant reserve can be smaller (e.g. Germany) because some plant expansions will be accessing allowances without using the NER. In member states where closure allowances are recycled into the NER the NER can be smaller at the outset than in cases where allowances from closed installations are cancelled, because a constant re-injection of allowances into the NER is expected.

Table 1 Member states' NAPs and size of the NER⁸

Size of NER relative to cap				
	<2%	2-5%	5-10%	>10%
NAPs	Austria; Belgium (Wallonia, Flanders); Cyprus; Czech Republic; Finland; Germany; Hungary; Ireland; Netherlands; Poland; Slovak Republic; Slovenia	Denmark; Estonia; France; Greece; Lithuania; Spain	Belgium (Brussels); Italy; Portugal; Sweden, UK	Latvia; Luxembourg; Malta.

The NER were also structured in different ways in different Member States. The table below shows how the NERs in different Member States were split over time.

Table 2 Member states' NAPs and structure of the NER

NER split into annual portions			
	Even split	Uneven split	One pot
NAPs	Belgium (Wallonia, Flanders, Brussels); Czech Republic;	Greece; Hungary; Ireland.	Austria; Finland; France; Latvia; Malta; Netherlands; Poland;

⁸ These divisions take into account the Commission's revisions to caps and NER sizes/other reserves in most cases (where the specific detail of where cuts were made was available).

NER split into annual portions			
	Even split	Uneven split	One pot
	Denmark; Estonia; Germany; Lithuania; Luxembourg; Portugal; Spain; UK		Slovak Republic; Slovenia; Sweden

Note: Cyprus is not included here as they have a NER of 0Mt. It was not clear from the Italian NAP whether the NER was annual or not.

Some of the initial NAPs notified to the Commission for phase I split their NERs in a way that ring-fenced portions for particular priorities – the main priorities being CHP or the electricity supply sector. It is important to note that no Member State expressly ring-fenced allowances for the electricity sector – but separate reserves have been set up for the energy and industry sectors over the trading period with the ability for allowances, in many cases, to move between these pots. The majority of these segmented NERs were not accepted by the Commission when decisions were made, although those in relation to CHP were accepted.

The different NER structures show two purposes – in the case of the division over time, there are different solutions possible to the same question. In terms of the set-asides, these sections provide incentives for clean technology uptake, in the case of CHP, and provide certainty for industry and cover government security of supply concerns in the case of the electricity sector set aside.

Definition and treatment of known new entrants

There is no definition of known new entrants in the EU ETS Directive, although the concept is introduced in the first guidance document⁴ (para 54) and very few NAPs make explicit mention of their treatment. A known new entrant has generally been taken to mean a case where investment in a new plant or expansion of an existing plant is quite certain and therefore the development is known. It does not, therefore, include cases where the installation was previously in existence (and would already qualify to be an incumbent in the scheme) but the expansion plan was uncertain or unexpected at the time the NAP was formulated.

In many cases known new entrants were included implicitly in new entrant reserve calculations, however, in some cases e.g. Greece, Ireland, Italy and Sweden, known new entrants were treated in a manner that was explicitly different from that of a usual new entrant i.e. allowances were allocated outside of the NER mechanism.

Calculating allowances at installation level

The table below shows the difference in approaches taken to the allocation to individual installations. It should be noted that key competition questions arise where this is different from the approach taken to incumbents. Considering that most countries used a historical emissions approach in allocating to incumbents, and a benchmarking approach to new entrants, we can see that there is a difference here.

The information shown below distinguishes between a fully and partially standardised approach. A fully standardised approach means that a standardised load factor for sectors or pieces of equipment or sector specific activity forecasts are used alongside an emission factor. In a partially standardised approach standardised emissions factors, or types of best available technology are used, but the allocation also relies on forecasts of activity provided by the installation – a non-standard portion.

Table 3 Member States’ NAPs and allocation methodology to new entrants

Benchmarking standardisation		
	Standardised	Partially standardised
NAPs	Austria; Belgium; Estonia; Lithuania; Spain; UK	Czech Republic; France; Germany; Ireland; Latvia; Luxembourg; Netherlands; Portugal; Slovenia; Sweden

The table appears to show a harmonised approach across Member States – but benchmarks were different in every country, the non-standard portion of the partially standardised approach leaves a great deal of room for variation and the devolved approach means that some Member States included reduction factors etc. where others did not.

As a result an operator planning a new investment in Europe could expect to receive a different number of allowances depending on where the investment is made in Europe. This differentiation raises competitiveness concerns between Member States but, at the same time, makes it possible for certain Member States to put more pressure on new installations to adopt clean technologies.

Deficit in the reserve

The following table shows how new entrants will be dealt with if the reserve of free allowances is exhausted. The new entrants will either have to buy their own allowances, or will be supported in doing so by the government. In several NAPs, no explicit statement is made, so it could



be assumed that new entrants will need to buy allowances on the open market, when the reserve is exhausted. Where Governments offer to buy allowances after the reserve runs out concerns about competition effects and the reduction of the incentive to invest in clean technology could result.

Table 4 Member States' NAPs and approach to shortage of allowances in the reserve

In case of NER shortage allowances will be bought by:			
NAPs	Installation	Government	Not explicit in NAP
	Austria; Belgium (Wallonia, Brussels); Czech Republic*; Greece; Hungary*; Latvia; Lithuania; Netherlands; Portugal; Sweden; UK	Belgium (Flanders); France; Germany ⁹ ; Italy; Luxembourg; Poland	Cyprus; Denmark; Estonia; Finland; Ireland; Malta; Slovak Republic; Slovenia; Spain

*In both the Czech Republic and Hungary applications to the NER must all be in by the end of the previous year. If there is a shortage, that year's allowances will be shared out on a pro rata basis, so no new entrant should have to buy the full number of allowances they require.

Surplus allowances

The following table shows how surplus allowances that remain in the reserve after the end of the first phase will be treated. The Commission's Guidance document for the second phase states that allowances left in an NER in the second phase should be cancelled or auctioned.

Table 5 Member States' NAPs and treatment of surplus allowances in the reserve

	Cancelled	Auctioned	Sold on open market	Not clear from NAP
NAPs	Belgium (Brussels); Cyprus; France; Germany; Latvia; Lithuania; Malta	Czech Republic ¹⁰ (annually); Greece; Hungary; Ireland; Poland; Portugal; Slovenia; Spain; UK	Belgium (Wallonia, Flanders); Finland; Italy; Luxembourg	Denmark; Estonia; Slovak Republic; Sweden

⁹ In this case "government refers to someone acting on behalf of the government see http://bundesrecht.juris.de/bundesrecht/zug_2007/gesamt.pdf - read paragraph 6(3). In Germany an institution charged by the government will be assigned to buy further allowances in the market, make them available at no cost to the NER. It will have a refund of these allowances in the subsequent NAP.

¹⁰ The Czech Republic has switched from auctioning to cancellation.

NOTE: The Netherlands originally intended to reallocate surplus allowances for free to incumbents. This was not allowed by the Commission on the basis that it constituted an ex-post adjustment.

4.2 Closure

Definition of closure

Almost all Member States have also included statements about closure in their NAPs and relevant legislation, including definitions of closure that include partial and temporary closure in some cases. In most cases an installation is considered closed if it ceases operation completely. However, in some cases a threshold of emissions in the reference period is used as a proxy for closure.

Table 6 Member States' NAPs and types of closure

Treatment of closed installations			
	No partial or temporary closure rules defined	Partial and temporary closure rules defined	Threshold for installation to count as closed
NAPs	Austria (no formal closure rule in law); Belgium (Flanders); Czech Republic; Denmark; Finland; Greece; Ireland; Latvia; Lithuania; Luxembourg; Malta (no closures expected so no rule specified); Netherlands (closure not possible in Phase I law); Portugal; Slovak Republic; Sweden	Germany; Hungary; Italy; UK	Austria (10% emissions, but not written in law); Belgium (Flanders – 20% emissions); Germany (originally 10% emissions but partial closure rule made this redundant); Hungary (10% emissions); Poland (5 kt/yr in ceramics sector); Portugal (>30% reduction in emissions)

How and when to remove allowances from closed installations

Table 7 Member States’ NAPs and treatment of allowances from closed installations

Treatment of allowances from closed installations				
	Added to NER	Cancelled	Auctioned	Not specified in NAP
NAPs	Austria; Belgium (Flanders); Denmark; Finland; Germany; Hungary; Italy; Luxembourg; Poland; Portugal; UK	Latvia; Lithuania	Ireland	Belgium (Wallonia, Brussels); Czech Republic; Netherlands; Slovak Republic; Sweden

*Note that in some cases the transfer of allowances to the NER is first subjected to a “transfer rule”, see section on transfers below.

Transfers

The table below indicates Member States that have made provisions for transferring allowances from a closed installation to another installation following closure. These provisions only cover transfers within a Member State, not between Member States. As such, transfers could incentivise re-investment in one Member State over another.

Table 8 Member States’ NAPs and transfer of allowances from closed installations

Transfer of allowances from closed installations to others upon closure		
	Possible between installations within a Member State	Not specifically considered
NAPs	Austria; Germany; Greece; Hungary; Italy (possible but not specified in NAP*); Poland; Slovak Republic; Sweden; UK	Czech Republic; Estonia; Finland; Latvia; Lithuania; Luxembourg; Malta (not expected); Netherlands

* Allowances can be transferred from a closed installation to a new entrant for three months after closure, after which time the allowances will be returned to the new entrant pot.

In Italy allowances can be transferred from a closed installation to a new entrant in the same sector within three months of the closure. In Germany, similarly, allowances can be transferred to a new installation in Germany within three months of closure. In Greece an operator can

retain allowances from a closed installation for an extension at another installation.

The following section of the report looks at the implications that this variety of approaches has on competition and incentives for clean technology.



5 DESIGN OF NEW ENTRANT AND CLOSURE RULES

This section looks more closely at the implications for competition, clean technology, signals to industry, simplicity/complexity, predictability in the long-term and administrative feasibility that result from, and relate to, the different decisions made on the new entrant and closure rules, as outlined in Chapter **Error! Reference source not found.**

5.1 Competition issues

Competition issues were highlighted as one of the main drivers for having new entrant and closure rules on two levels – competition distortions between incumbents and new entrants in the EU ETS, and international competition. The variety of approaches taken to the detail of new entrant and closure rules, however, has led to further potential distortions of competition between installations in different Member States.

In this section the implication at each level is investigated in turn.

5.1.1 National competition between new entrants and incumbents

There are several elements of the rules that have a bearing on the equality of treatment of new entrants and incumbents. It is important that these players are treated equally because they operate in the same commercial market and should, therefore, be subjected to the same regulatory framework. Also, differentiated treatment at this stage may lead to further complications in the future by setting expectations in a certain manner and may also lead to incentives for gaming the system.

Note that although the categories of incumbent and new entrant can be clearly defined in the first phase of the EU ETS, in the second and future phases most of the new entrants from the previous phases become incumbents⁵. This is straightforward in terms of appellation but could cause complications if allocation methodology relating to incumbents was different from that for new entrants and therefore investment factors for the operators involved differ over the change in phases, e.g. where new entrants allocated according to benchmarking become grandfathered incumbents. These operators face differing degrees of

certainty about allocation than grandfathered incumbents moving from phase to phase. The incumbent may be unsure about the reference year that will be chosen for a historical emissions approach, and the new entrant could face a complete change in allocation approach – moving from benchmarking to a historical emissions approach.

The areas where competition between incumbents and new entrants is important to consider are:

Definition of new entrant:

Currently the definition of new entrants excludes increased use of existing capacity at an installation. Therefore, where free allowances are given to new entrants there is differentiated treatment between an operator whose production grows through newly built facility and one where production grows through increased use of an existing facility. This difference is a recognition of the likely difference in the scale of growth in these two cases, but doesn't account for examples where large excess in capacity has been built into a system already as part of a foreseen growth trend.

It could be argued that such differentiated treatment between large growth within existing plants, and that which takes place in new entrants, is further exacerbated by the fact that newly built installations have a greater potential to access clean technologies than their existing counterparts. Therefore, the growth represented by a new entrant, that takes place in a new installation with better access to clean technology will get allowances from the NER, whilst large-scale growth taking place in an existing installation, which has less access to carbon-savings through use of new technology, receives no allocation.

From an industry perspective this differential is unfair as allocation to these different types of growth does not reflect the likely scale of emissions in the two cases – likely to be greater for growth within an installation than within a brand new installation. However, from the perspective of the environmental goals of the scheme allocation should not be according to need. But it still could be argued that comparable types of growth should at least be treated in an equivalent manner (i.e. receiving or not receiving free allowances), even if not to an equivalent scale.

Whether or not allowances are allocated for free to new entrants:



One can argue that the approach here should be consistent with the approach taken to incumbents in order to reduce competition distortions. In this perspective, free allowances should be given to both, not just incumbents, or should be given to neither. It could be argued, however, that free allocation to incumbents and not new entrants does not constitute an unfair advantage to current players. This is based on the argument that new entrants can take the full cost of carbon into account in their investment decisions, an opportunity which incumbents did not have at the time that they began operation.

The size of the reserve:

The calculation of the size of this reserve involves splitting the fixed total cap between new entrants and incumbents. It is important that the growth rates, or other factors upon which this division is based are as realistic as possible so as not to unfairly disadvantage either group. At the same time, as the total cap is fixed, it is important that the inherent differences between new entrants and incumbents should be considered in making this division – particular in terms of access to less carbon-intensive technology. As shown in the tables in section 4.1, there is a range of NER sizes across the EU-25, and therefore a range of approaches taken to this split of total cap between incumbents and new entrants.

Ring-fenced portions of the reserve:

As discussed in the section above, the size of the new entrant reserve constitutes a division between new entrants and incumbents. If this division results in the setting-aside of a certain quantity of allowances for certain sectors, for example, this could result in an unequal burden being placed on some sectors as opposed to others as allowances are reduced for one incumbent sector to produce a ring-fenced portion for another sector's new entrants.

This is unlikely to be a serious concern as ring-fenced portions have mostly been used to incentivise technologies such as CHP. It should be noted that the EU ETS directive largely allows for individual Member States to make their own decision in relation to burden-sharing between sectors so it is not necessarily counter to the EU ETS policy for one group of incumbents to pay for another's reserve.

Calculating allowances at installation level:

In the first phase NAPs a large difference between the allocation approach used for incumbents and for new entrants was observed with most incumbents being allocated allowances through a historical emissions approach and most new entrants via benchmarks. As a result,

similar installations could receive very different quantities of allowances. This does not necessarily represent a distortion of competition. The question is to what extent does the allocation meet the need of the installation, and then, to the extent to which it doesn't, is the effect intended to incentivise clean technology or is it an unintended 'misallocation'.

As long as a historical emissions approach is used for incumbents it will not be possible to use the identical approach for incumbents and new entrants. However, looking towards future phases this is an important issue to address. If a benchmarking approach were used for both new entrants and incumbents then an equal playing field could be produced for both groups. However, this does not necessarily mean using the same benchmarks. For example, in looking at benchmarks for the electricity sector incumbents it may be considered more realistic to base allocation on fuel-specific benchmarks, as it is unrealistic to expect an existing coal-fired plant to change its fuel. However, for new entrants a gas-based benchmark is possible as new power plants have the ability to choose the fuel that they use.

A differentiated approach could lead to step changes, however, when a plant changes category from a new entrant to an incumbent between phases, unless separate categories of "new incumbent" are created.

As with other allocation decisions, the provision of bonuses must be devised with consideration to the approach taken to incumbents e.g. bonuses for the use of CHP could be available to both incumbents and new entrants in determining allocation, or it could be argued that the sole purpose of such a bonus is to encourage newly built CHP and therefore the difference is an intentional element of the policy design.

Transfer rules:

Including rules that allow for the transfer of allowances from a closed plant to a new plant owned by the same operator should be paralleled with rules for the transfer from a similarly closed plant to an increased use of an existing plant through a rationalisation plan. This allows fair treatment between a rationalisation plan that includes a new entrant and one that includes an incumbent. This need not be the case if the purpose of the policy approach is to encourage transfer of allowances to the newly built only, which might use cleaner technology, or to installations that meet a certain benchmark.

Furthermore, it should be noted that transfer rules do not treat incumbent operators closing one installation and building a new one in

the same way as investors entering the market for the first time, or without closing down another plant first. The new investor might not have equal access to allowances as the operator closing a plant, as the first is subject to the restrictive size of the NER (where a NER exists at all), while the second is subject only to the constraints of the transfer rules. While such an approach encourages existing operators to stay in the region, it does not subject the incumbent operator to the same pressures as the completely new entrant operator would face. In a system where no free allowances were made available to new entrants, this inequality could only be solved by removing transfer rules altogether.

Overview

Looking at the issues described above, the key areas where distortions of competition can occur between incumbents and new entrants relate to the way in which the overall size of the NER, and the individual installation allocations are determined.

5.1.2 Competition between Member States

Section **Error! Reference source not found.** shows how different Member States have approached new entrant, closure and transfer rules differently. This range of approaches has two main implications. Firstly, there is a distortion of the market for operators or investors in different EU countries. Secondly, Member States are given the ability to promote the use or investment in certain clean technologies, in certain sectors as relevant to their national circumstances.

Harmonisation of approaches between Member States is considered in more detail later in the report but it should be noted that whilst harmonisation may solve some of the competition issues, it may negate some of the clean technology benefits. These results do, of course, depend on the way in which the harmonised rules are formulated.

This section looks at the elements of new entrant and closure rules where different approaches are observed and points out the key areas where market distortions are evident.

Definition of new entrant:

For the most part, the same definition of new entrant, in terms of eligibility, was used across Member States. Where there are differences market distortions are created as investors in one EU country will receive free allowances, but they would not in another country. The use of different time boundaries to delineate the boundary of incumbents and

new entrants in different Member States is unlikely to create any competition concerns between investors in different Member States, as installations falling near the boundary have already made their investment decisions.

New entrant reserve:

The choice to provide a reserve of free allowances, in contrast to having no reserve, is an important area where temporary distortions in the market could be created. In the first phase, all Member States chose to use a free reserve, however, in future phases this might not be the case. Furthermore, the existence of a NER in every NAP does not guarantee a level playing field as size, and various rules differ across the NERs. It is important to note, however, that the use of auctioning or purchase for new entrants is also a way to encourage investors to incorporate the real cost of carbon into their decision making (see discussion in section 5) and it could be argued that countries should retain the autonomy to put such policies in place.

Definition and treatment of known new entrants:

Where known new entrants are treated unjustifiably favourably (e.g. by being able to state the level of their need, rather than using a set approach) there could be a market distortion between known and unknown new entrants. However, if known new entrants are incorporated into the scheme as new entrants or incumbents, provided they are treated in the same way as others in these categories, their treatment will not, in itself, cause market distortions.

The size of the reserve:

If caps in some countries are inflated as compared to those used in other Member States, more free allowances will be available as compared to need, setting up a favourable investment environment as compared to other Member States. The way in which the new entrant reserve size is determined could be a key source of market distortion. In the first phase the Commission's review role mitigated this by reducing the size of some countries' overall cap, which indirectly led to also to a cut in the size of the NER.

The structure of the reserve:

Where the reserve is divided over time, the likelihood of the reserve running out in some countries before it is exhausted in others might alter the playing field. However, this could be an intentional design element enabling each Member State to make their own decisions. The difference in the size of the reserve over time could be signalling to investors that they must gradually become less carbon intensive over

the phase. Alternately, the changes over time might reflect changing growth rates in the country. Different structures may be quite legitimate.

In some structures there are portions set aside for certain technologies, such as CHP. Although this structure favours investment in these technologies in other countries, through the guaranteed availability of free allowances, again the Member State is given autonomy to make decisions relevant to national circumstances. Important factors apply here in relation to the penetration of technology such as CHP already.

Calculating allowances at installation level:

The methodology for allocating free allowances to individual new entrants is one of the areas where the different approaches between Member States could create the greatest market distortions. Where approaches to calculating the allowances are significantly different an investor may face real temporary advantages, in terms of free allowances, by setting up in one European country rather than another. On the other hand, the varied approaches to calculating allocation allow for different approaches in terms of incentivising the use of clean technology.

The longer-term expectation in relation to these allocation differences is important here. Differences in allocation will be weighed against other factors behind the investment decision e.g. cost and quality of employees, distance from markets and suppliers etc. The future prospects in terms of allocation will have a greater bearing on this decision than the allocation methodology in any given phase itself. However, where there are differences in allocation methodology AND uncertainty about the future approaches, investors may have to take a decision based on initial ie phase I or phase II allocation methodologies and an unclear perception about the future direction of these approaches.

Surplus in the reserve:

The treatment of excess allowances in the reserve can lead to distortions in the market. If allowances are auctioned access should be open to all operators across the EU, so there should be few competition concerns.

Deficit in the reserve:

The approach taken by Member States if the reserve runs out is also a source for potential market distortions. If the government continues to support new entrants beyond the agreed size of the reserve, by adding



more allowances directly, this would run contra to the scheme by increasing the overall cap across Europe. Governments could borrow against future phases, but this still would threaten the environmental effectiveness of the scheme going forward as future commitments are unconfirmed. If a government purchased allowances on the market in order to top up the NER, this could simply be considered an investment subsidy (depending on state aid rules), however such aid could still endanger the fair playing field by reducing transparency and changing the stakes from the NAPs agreed by the Commission at the outset of the phase...

Definition of closure:

As with the definition of new entrants, a different treatment of the definition of closure could lead to differentiated treatment of plants closing in one country temporarily or partially and retaining their allowances, whilst they do not retain them in other countries. Similarly, different definitions of full closure (e.g. below a threshold) would also lead to different treatment of installations operating at a lower level than in the reference period in different countries.

How and when to remove allowances from closed installations:

The decision to remove allowances from an installation on closure would create a difference in treatment between countries, if some were to allow retention of allowances after closure, whilst other countries did not. Allowances received on closure in this way, if not received in other countries, could be seen as a windfall profit.

Transfers

Transferring allowances from closing installations to other new/existing installations in the same Member State sets up an incentive to these operators closing businesses to re-invest in the same Member State because their free allowances are guaranteed. If transfer rules were extended to allow transfer to other Member States, this competition concern could be avoided.

Furthermore, the structure of transfer rules are important in ensuring that a level playing field exists with new entrants both within that Member State and in other Member States. These rules will determine the size of the allowances transferred – important both to the competition element, and the clean technology aspects of the rule. If the full value of the closing installation's allowances can be transferred, there is less pressure put on the operator to adopt cleaner processes because they will have sufficient allowances to cover emissions. However, operators might still be incentivised to create a low-carbon

facility, because the extra allowances will then be available for sale. If there were common EU-wide transfer rules (or no transfer rules) any competition issues associated with transfer could be avoided.

Conclusion

A large number of the issues can cause competition concerns between EU Member States but decisions to address these concerns must balance out the need for a degree of autonomy at the Member State level.

5.2 Investment signals to industry

The key purpose of having clear rules in relation to new entrants, closure and transfers, is to enable industry to operate in a clear regulatory environment. The main reason to have a (free) new entrants reserve is that it imposes fewer costs on new entrants, therefore does not inhibit new investment. It is important to note that regardless of the approach taken to new entrants uncertainty continues to exist for both incumbents and new entrants about the amount of allowances and the allocation method (free or not etc).

Having no NER, but requiring new entrants to buy on the market is an equally clear regulatory environment to one in which there is a free NER. It may provide more uncertainty to industry, as well as increased cost, because market prices for allowances are uncertain. However, it could still be part of a set of clear investment signals from policy-makers to industry.

In order for good communication to be established with industry, it is important that rules are outlined clearly and that the approach in particular in terms of the definition of new entrant and calculation of allowances is made clear well in advance of the start of the phase.

According to a recent survey on the position of stakeholders¹¹, industry is interested in a lead time of three years before a phase begins in order to inform their investment decisions. Investment horizons vary across sectors though, and some could require a longer or shorter time.

Furthermore, industry's desire has to be balanced against the need for government to have accurate data on technology available and

¹¹ McKinsey, 2005. Highlights are published at http://www.eu.int/comm/environment/climat/pdf/highlights_ets_en.pdf

emissions projections in order to make policies based on realistic projections. The planning of lead times should try to ensure that decisions about key issues such as whether there should be a reserve at all could and should be made as far in advance of a phase as possible.

Other aspects of the rules also send out signals that governments understand the way in which businesses operate. Including rules that allow for transfer of allowances on closure to other installations is a rule that more than half of companies surveyed in the survey¹¹ are interested in.

It could be expected that rationalisation plans take place in the course of ordinary business and providing facilities for carrying out normal business practices is an important provision and signal to industry. This priority has to be balanced against the importance for policy to incentivise the use of clean technologies. Supporting rationalisation to old plants may lead to the increased use of more polluting installations. A good solution, in this case, could be to formulate rationalisation policies in a way that only transfers allocations to plants performing above a certain benchmark.

5.3 Incentives for low-carbon technology

The central aim of the EU ETS is to reduce carbon dioxide emissions. While this is primarily achieved via the EU-wide cap and the corresponding scarcity created, elements of the new entrant and closure rules could provide targeted incentives for low carbon technology. In some cases different approaches could be taken in different Member States based on their individual decisions to incentivise certain green technologies, but it is the intention of the EU scheme to be technology blind.

These elements of the new entrant and closure policy to consider are discussed in more detail in the section that follows.

In reading this section, it is important to note the temporary nature of the new entrants, as described in Section 3.3. For all subsequent phases of the scheme new entrants are likely to have a claim to free allowances if such rules are applied to other incumbents, although no official guarantee has been given. Therefore the investment signal is highly dependent on decisions made by the Member State about allocations to incumbents in the future, and the treatment of new entrants in one phase in the phases that follow.

Definition of new entrant

The definition of a new entrant is set in the Directive, but the description of those new entrants who are eligible for free allowances could be used to restrict the extent to which such free allowances are available, thus promoting the use of less carbon-intensive practices e.g. Sweden chose to bar any fossil-fuel fired power plants from accessing free allowances from the NER.

New entrant reserve

The decision of whether or not to provide free allowances or to have new entrants buy allowances on the open market is a key area where investors could be influenced to adopt clean technologies. Auctioning or purchase of allowances on the open market would lead operators to incorporate the full cost of carbon (according to the market price) into their investments, rather than be allocated free allowances on the basis of an estimate of need or through some other measurement.

The ability for each Member State to make this choice independently allows for different decisions to be made on the basis of national policy – for example, some countries might be under greater pressure according to their Kyoto targets and therefore may wish to put more pressure on new installations in the EU ETS sectors to reduce emissions. Alternatively, in other Member States EU ETS sectors may already have low emissions profiles and the burden may be placed on other sectors instead.

The size of the reserve

Where it is decided to have a new entrant reserve available for free, the size of this reserve is an important decision. The way in which the reserve is determined relates to the Member State's individual approach and reflects whether the assessment is purely based on emissions projections, an assessment of need by government or by industry, or other method of size assessment, and whether or not it includes reduction factors. The size of the reserve could reflect the ability for new entrants to incorporate clean, low-carbon technologies – an option that is not open to incumbents to the same degree.

A smaller reserve (than that projected) could be supplemented by an auctioned portion of allowances within the cap to ensure that investors incorporated the cost of carbon into their investments, or the Member State could choose a smaller overall cap altogether, increasing the environmental effectiveness of the scheme at EU level.



A smaller reserve sends a strong signal to investors about the need to incorporate clean technologies into their investments, but it might discourage investors who see this as an increased cost.

The structure of the reserve

A Member State can use the structure of the reserve to encourage investment in particular clean technologies by using set-aside portions of the reserve that guarantee free allowances for those purposes alone e.g. CHP. In the extreme, a Member State could decide to provide a free reserve only for such purposes, leaving other types of new entrants to buy on the open market. This approach could be too selective vis-à-vis other types of clean technology – leading to a situation where only one type of clean technology is favoured. For a technology blind approach, ring-fenced sections in the reserve could be set aside for all clean technology.

Dividing the reserve in unequal portions over time, if the allowance cannot pass from one year to the next, could act as a graduation to move investors from a position where they obtain allowances for free to a position where increasingly, carbon is priced into investments. This could make sense in terms of sending out signals to investors but individual investors may only assess the situation at face value at the time when they wish to invest. This gradual reduction allows for a Member State to tighten up the number of allowances with time, increasing the environmental effectiveness of the scheme in terms of that country's cap.

Calculating allowances at installation level and the provision of bonuses

The methodology used for allocating to installations can act as the key stimulus for energy efficiency improvements in new installations/extensions and for the development of renewables installations. In some countries the bar for energy efficiency was set very high through benchmarks, whereas in others, where installations were allowed to apply to the new entrants reserve on the basis of their need regardless of the nature of the investment, there were no such incentives.

Surplus in the reserve

If any extra allowances remaining in the reserve after the phase is complete were cancelled, there would be a tightening of the overall cap in the scheme and an increase in the environmental effectiveness.

Deficit in the reserve



If the reserve runs out and applicants are asked to buy allowances on the market, this will act as an incentive for those particular investors to use cleaner technology, however, it could also lead to those investors setting up their installations elsewhere. Should the operator set up an installation in a country outside the European Union with less stringent rules, this will be a disadvantage in terms of environmental achievement.

Treatment of closure

The treatment of closure in general has an impact in terms of the overall allowances available in the system – so if allowances for an installation are cancelled on closure the cost of allowances in the system as a whole should increase, adding incentive for investment in clean technologies.

On the other hand, cancelling allowances at closure incentivises old inefficient assets to keep operating and thus discourages investments in clean technology.

This dilemma is impossible to solve in a grandfathering scheme based on historic emissions, but would not exist under other allocation systems e.g. a system based on full auctioning of allowances.

Transfers

Transferring allowances from closing installations to other new or existing installations could be used as a way to incentivise the uptake of cleaner technologies. Either the receipt of allowances could be made conditional on the performance, in terms of carbon intensity, of the receiving plant. Or, the formula for the number of allowances transferred could include a reduction factor that relates to a benchmark for the relevant process. However, such an approach would be incredibly complex and more in line with a traditional regulatory approach, rather than embracing the opportunities and carbon price signal offered by the trading system.

Length of certainty over these decisions

The longer that installations are able to have information about the way in which the policies will work, the easier it will be for them to take on board. The key issues here are the length of the allocation period, likely to be comparable to that for incumbents, and the lead time given between the decision and putting it into place.

Conclusion

There are several elements of the rules that can be used to incentivise the uptake of clean technology.

It could be argued that the use of a market-based approach that creates a market for carbon should incentivise the use of low-carbon technology without the need to include special bonuses, or reserved allowances for technologies such as CHP. According to this argument, there is no need for the new entrant rules to particularly incentivise any chosen clean technology, or clean technology more generally, at all. Although it could be argued that the decision to include new entrant and closure rules has already disturbed the ability of the market to truly reflect the cost of carbon. In the same way that some market rules have been introduced to add investment incentives to operators, it could be argued that there should also be rules that favour clean technology investment.

The argument that a market-based approach should incentivise low carbon technology ignores the fact that there are other initial cost barriers to the implementation of these technologies that bonuses might help overcome. However, there are promotion policies and programmes designed specifically to overcome those barriers, and furthermore, higher power prices also lead to an indirect push for cleaner technologies.

Therefore, the question is really whether or not the structure of the EU ETS is intended to directly have a role in incentivising clean technologies, beyond that inherently created through the market. If supporting less carbon intensive production is indeed an additional objective pursued then further support mechanisms in the shape of bonuses or ring-fenced reserves could be considered. However, if this is not considered an objective then the system design should not be used to this end, and other support mechanisms should remain the route for achieving such goals. Any such support mechanisms would have the benefit of already operating within an EU ETS climate, where the size of incentives and support may be smaller than without the existence of an EU ETS.

It should be noted, that regardless of the discussion of further incentives, CHP could be considered a special case. The current EU ETS system is a direct emissions based system and therefore currently industrial installations buying electricity could choose to switch to CHP – more efficient overall in terms of energy conversion to heat and electricity. However, depending on the rules of allocation to new entrants switching to CHP – own generation which requires fuel use and therefore more allowances – could be less attractive than continuing to use indirectly generated electricity. On the other hand, with higher electricity prices resulting from the EU ETS, at least in part, CHP could become more favourable – this decision will continue to depend on the

alternative i.e. cost of allowances (free or not, allocation methodology etc) versus cost of electricity at the higher prices.

5.4 Simplicity/Complexity

The relative simplicity/complexity of the system should be considered both from the perspective of government administrators and participants in the EU ETS. The presence of a wide range of different rules in relation to new entrants, transfers and closures that differ between Member States increases the complexity both for governments and for participants.

A large number of rules has been developed, along with an allocation approach to new entrants, in many cases autonomously in Member States. As a result a great deal of government resources have been put into developing the system, at considerable cost. The allocation methodologies in particular have become very complex – particularly where benchmarking methods have been used. The calculation of the size of the new entrant reserve has also been quite a complex estimation – in particular where an estimate of closures, transfers, and in some cases rationalisations has become involved. The sensitivity of making these estimates has been further compounded by the need to include commercially sensitive information in the accurate determination of estimates.

Overall, a reduction in the number of rules surrounding new entrants, closures and transfers would reduce the complexity of the system for all involved – and this would have a multiplying affect if harmonisation across Member States was achieved, as there would be less difficulty for both governments and industry in understanding the different approaches taken in different Member States.

The choice of overall allocation methodology in the EU ETS would have a knock-on effect on the choice of new entrant rules. If the EU ETS allocation was based on full auctioning, for example, there would no longer be a need for complex new entrant and closure considerations at all. However, the issues here are explored as they are encountered under the current conditions, which may well continue.

In some cases the choice of rule can increase simplicity. A straightforward definition of new entrant reduces the complexity in determining eligibility. Including no special treatment of known planned developments is the simplest approach. Reducing or removing any extra bonuses or set asides is also the easiest way to structure a free reserve, should there be one. In terms of allocation methodology – choosing to

have no free reserve is the simplest approach, although auctions still require system design, this will be less complex than developing and agreeing benchmarks. The procedure for accessing the reserve can be done in a simpler or more complex way, depending on the degree of evidence required from a company before they are given their allowances in the pot, or the type of "queueing" system that might be developed.

Looking at closures, the determination of a closure is proving increasingly complex as the system continues to operate. Therefore, it would be the simplest approach to remove closure rules altogether, and the more different approaches that are introduced requiring proof of partial, temporary or closure below a threshold, will increase the complexity surrounding this rule.

Transfer rules are the most complex element of these rules. The ability to transfer allowances on closure creates inequalities (as discussed earlier) and can also require a great deal of paper work on the part of the participant and the government administrator.

Simplifying Transfers

One possible solution to the complexity of transfer rules, and new entrant rules in parallel, is to introduce some type of implicit transfer rule. This type of rule would exist if closed installations retained allowances, and new entrants did not receive any. Thus, on closure, allowances would be available for transfers from the closed installation without any further involvement necessary from government. In theory such transfers should help enable transfers from older, more carbon-intensive facilities, to newer, cleaner ones. This approach would continue to allow transfers between plants owned by the same operator, but would not distinguish between transfers to plants operating in other EU Member States. Furthermore, this type of approach demonstrates a symmetry of treatment whereby allocations are not updated with changes in operation.

However, there are several potential issues that could arise from such an approach:

- a) An operator could close all of its operations within the EU and then effectively receive a grant in the form of these allowances as a bonus for transferring production out of the EU, and to potentially more polluting installations. It might be difficult to distinguish between a situation where such a move is taking place or when there is a time lag between closure of one EU plant and the opening of its new replacement.

- b) A distortion of fair competition within the sectors. Installations receiving the transferred allowances would either be new installations or incumbents expanding their activities. In the former case, these installations would receive an advantage compared to any other new entrant to the market if a new entrant reserve no longer existed. This approach would therefore create a protectionist mechanism within sectors towards historical incumbent companies. However, this would only be the case where the value of the allowances was great and had a significant impact on the investment decision.
- c) In the latter case installations receiving transfers would receive a subsidy for increased production in the form of the allowances, that would not be obtained by other plants similarly increasing their production. Again, this might enable plants owned by the operator of the closed installation to operate more competitively within the product market than competitors who have not closed a plant, but have several plants that have the potential to expand production.
- d) The treatment of the installation after the phase is completed. The closed installation would now fall out of the system but the installation to which production had been transferred might not be allocated further allowances if the historical proportion of allocation is based on data coming from before the second phase (2008-12).

As a result some management of the transfers would still be required. Here suggestions are as follows:

- a) Concerns about transfers outside of the EU could be addressed by stipulating that operators of closed installations can only retain their allowances if they own more than one asset that falls within the EU ETS, or even the EU ETS sector concerned. Furthermore, limiting the scale of allowances that can be kept for transfer would also reduce the scale of this potential perverse incentive to leave the EU.
 - b) The concern (b) above about competitiveness could be tackled by ensuring that a new entrant reserve did also exist, however, in this case some management would still be required to ensure that a new entrant benefiting from transferred allowances does not also access the new entrant reserve. A notification system across the EU by which a Member State receiving a new entrant request can notify other Member States to find out whether or not the same operator has closed an installation recently, and therefore benefited from the implicit transfer provision, could be an example of how to manage this challenge. However, it may
-

be that the closure only occurs after the new entrant application, or it might be difficult to prove that it was related to a genuine transfer from the operator's perspective, therefore limiting the ability of such a system to prevent the receipt of excess allowances.

- c) A more straightforward solution to (b) and (c) would be to limit the the amount of allowances retained by a closed installation. Thus transfers are recognised as a valid way to abate emissions, however, no overwhelming advantage within the commercial markets would be accorded to this activity when compared to increased use of an existing plant, or new entrants to the sector overall.
- d) A solution to issue (d) would be to continue to allocate allowances to closed installations forever. As mentioned earlier, there may be legal issues related to such an approach but it has been used in the US SO₂ scheme. Such an approach would enable allowances to continue to reflect the transfer for as long as the operator existed. If such an approach is taken, there still might be a need to reduce the allowances that are retained by a certain factor. If this is not the case then potentially, as installations close, allocations can continue to be retained and transferred to new assets.

Simplifying transfer rules is desirable, and they could continue to exist with relatively few downstream concerns, if, as suggested above, some limits or proportions were set in relation to how many allowances can be transferred, and there is a caveat to ensure that operators with no installations within the EU ETS or even EU ETS sectors can retain allowances on closure. Thus a simpler rule would be created.

It is important to note that the suggestion above – to retain allowances on closure (either forever or for a given period of time) may be a valuable suggestion outside of the attempt to simplify transfers. This suggestion is discussed again in Section 6.2.

Conclusion

Overall, removal of new entrant, closure and transfer rules would be the simplest approach. Even in the absence of such rules, information would still need to be available on some aspects of how to treat these special cases, at least in the short term, while free allowances are still available to some incumbents. These details would need to distinguish this group of installations from the incumbents. This information would include:

Definition of closure;

Definition of new entrant;



When a closed installation ceases to receive allowances (at the end of a phase if this is no longer the end of a year etc.); and
 How new entrants are treated in later years or phases, where others continue to receive free allowances.

The decisions about system design should be taken in a way that aims to create as simple a system as possible, whilst still tackling the elements of competitiveness concern and clean technology incentives discussed above.

5.5 Long-term signals

The wide variety of rules currently available gives the impression that new entrants will always receive allowances for free and in rough accordance with their level of need. The development of transfer rules serves to compound this impression by providing allowances for more of the decisions that take place in the industrial life-cycle.

While it is clearly important that the EU ETS policy is developed with an understanding of the different stages in the life-cycle of an installation, this does not mean that rules have to be devised in order that free allowances are available at each of these stages, and where they are it is not necessarily true that they should be provided in line with need.

Clear signals should be sent as far as possible in advance indicating the degree to which allowances will be available to new entrants in the future. This is important in ensuring that the cost of carbon will be genuinely incorporated into investment decisions that themselves have a long lifetime.

In particular, it is important to indicate now the extent to which allowances for new entrants might not be available in the future and to make decisions about how new entrants in the current system will be treated in future phases, independently from the treatment of incumbents. This is a key long-term signal if the intention is for investors to factor in carbon costs for the entire lifetime of a project – not just for the years where it is considered a new entrant (which would be the case if there was no new entrant reserve, but allowances were given for free to incumbents which the installation would become after a certain point).

The treatment of a new entrant after the phase in which it enters the scheme for the first time is an important part of the signals it receives in terms of long-term treatment under the scheme. A new entrant which receives no free allowances initially should expect to be treated the

same throughout the lifetime of that installation in order to send strong signals about investment in low carbon technology. It is possible to send the long-term signal that new entrants will never become incumbents even whilst new entrants are receiving free allowances, but are still treated differently from incumbents (the use of the status of new entrants beyond their first phase in the scheme is discussed in more detail in section 7.1).

Long-term signals can be strengthened through a harmonised approach to the rules under discussion. A harmonised approach would ensure that the Member States would be speaking with one voice, and the message about the direction of future policy would be a strong one.

The length of certainty required for decision-making varies across sectors – particular between the power sectors and other sectors. This relates to the length of time over which an investment is costed – which could be different for a new power plant as opposed to a boiler in an industrial installation. It is not practical to offer different levels of certainty and therefore long-term signal to different sectors, but it is important to understand that the participants within the scheme operate in different investment environments in this respect. The greater the true long-term certainty, the fairer the system and the clearer the signal in relation to lower carbon intensity investment.

Even in the case where specific details of new entrant, closure and transfer rules cannot all be clear now – the overall plans for development e.g no new entrant reserve by x, should be clarified as soon as possible, and for as many phases, or as long a phase, as deemed practical.

5.6 Administrative feasibility

The question of administrative feasibility is closely linked to the question of complexity, where complexity for a government administrator is considered. In many Member States the teams dealing with the EU ETS are very small. Therefore, the decision to include complex rules and approaches on new entrants, closures and transfers makes the EU ETS increasingly more difficult to administer. Where harmonisation takes place, and therefore some of the administrative burden is transferred to the EU – at least at the level of strategic decision making, if not also for operational tasks, – some of the administrative pressure will be removed from Member States.

The extent to which it has proven feasible to actually carry out in full some of the provisions on closure and transfer will become clearer when

the scheme has been in place for a little bit longer. Already, evidence is emerging that it is extremely difficult to deal with closures, but the feasibility of the putting the other rules into practice will need to be investigated further when the EU ETS is further established.



6 DESIGN OF NEW ENTRANT AND CLOSURE RULES

Future phases of the scheme, should be designed in a way that considers all of the clean technology and competition concerns and opportunities, while striving for simplicity and administrative ease. This section looks at design elements of the scheme and tackles whether or not there is a need for new entrant and closure rules at all.

6.1 Including new entrants and closure rules

Ensuring that new investments are treated on a level playing field with existing plants is the primary argument for including provisions for new entrants, and therefore new entrant rules, in the EU ETS. By providing free allowances to new installations, or investments in expanding existing installations, these operators are treated in the same way as their competitors, or sister plants who received free allowances for their existing installations.

On the other hand, it could be argued that new entrants to the system have a greater ability to invest in clean technology, as compared with incumbents, and therefore should not be treated in the same way as incumbent installations.

Furthermore, it is possible for the new entrant reserve to be used as a loophole by which a country increases the size of its emissions cap¹² and therefore effectively fails to put pressure on the economy as a whole to reduce emissions. This is not to say that there will not still be installation level pressure to reduce emissions, but if the new entrant reserve is too large, and the intention is to sell the excess allowances at the end of the phase, there could be an overabundance of allowances on the market EU-wide. This effect would run counter to the demand that, through the NAPs, the EU ETS sectors make a fair contribution to emissions reductions in the Member State. This change to the overall availability of allowances in the EU will not occur if all countries make an error to the same degree, but this is unlikely given that there are up to 25 different approaches.

¹² Although this should not be possible, as an inflated cap overall is not in line with the criteria of the Directive, it might be easier to argue large growth values for the new entrant reserve that might be quite speculative, yet uncertain, whilst it is harder to do so for the economy as a whole.

The size of the potential impact on the supply of allowances in the market must be considered at the scale of all of the new entrant reserves across the EU. If many Member States misjudge the size of the reserve a large distortion is possible. This risk can indirectly be addressed when the Commission assesses National Allocation Plans including the size of the overall caps. Looking to future phases of the EU ETS, it is possible that allocation from the NERs (if they exist at all) will be less than needed, and therefore there will not be a concept of a “correct size of the NER”. However, such a concept will still exist in determining the split between new entrants and incumbents of the total free allowances available, even where these are set below need.

The table below looks at the advantages and disadvantages of having a set of rules that includes a free reserve of allowances, and accompanying closure rules.

6.2 The inclusion of a free reserve and closure rules

The table below sets out the advantages and disadvantages of having a free reserve of allowances for new entrants, and a set of closure rules. The option to make new entrants buy allowances on the open market or in an auction, and the relationship between closure and new entrant rules is then explored.

Table 9 The advantages and disadvantages of setting up a new entrant reserve with free allowances, and including other closure rules

Type of rule	Advantages	Disadvantages
New entrant provision through free allowances in a reserve	Less competition distortion with incumbents – new investments in the EU treated more equally with incumbents	Rules to be chosen carefully to avoid increasing the competition distortion with respect to incumbents by delivering unfair benefits to new entrants who have better access to clean technology than incumbents but receive free allowances in any case.
		Current new entrant provisions add incentives to building new plants vs. increasing use of existing plant capacity, however, such a decision will mainly be taken on the basis of other

Type of rule	Advantages	Disadvantages
		strategic considerations beyond the cost of carbon.
	Reduces competition distortions versus investments outside the EU	Different new entrant rules in different countries can distort competition between EU countries
	Allocation rules to new entrant can incentivise clean technology	
		Where a new entrant reserve is used, this could be used in a way that increases the size of the overall EU-wide cap, reducing environmental effectiveness.
Closure rule	Prevents windfall profits to installations who close (where rules remove allowances on closure), and therefore are not within scheme boundaries	Does not include closure as a legitimate abatement option (where rules remove allowances on closure).
	Ensures a fairer approach to the distribution of the capped emissions amongst participants	
All rules		Too much interference in the market does not allow prices to truly reflect the cost of carbon (varies with the choice of rule).
		The development of complex rules will always produce winners and losers.

Table 9 shows that the inclusion of a free reserve for new entrant and closure rules entails a number of advantages and disadvantages. It is important to put these stated pros and cons into context – the allocation to new entrants affects a relatively small number of operators and installations when compared to the incumbent participants and the value at stake of the total allowances allocated to those existing installations.

Reflecting the cost of carbon

The creation of a mature, functioning market is impeded by the existence of new entrant and closure provisions. However, the way in

which free allowances are distributed to incumbents – and the degree to which this entails pressure to reduce emissions – also has a strong effect on the creation of a carbon market that reflects the true costs of abatement. Therefore the challenge of creating a mature, well-functioning market in carbon should be seen as a combination of the approach taken to the allocation to incumbents and the existence and design of new entrant and closure rules.

In the long-term the argument that the market must be allowed to develop and fully reflect the cost of carbon becomes stronger. This argument assumes a scenario where other regions of the world have developed stronger climate policies than they have at present, such that they are comparable to those in the EU, and there are international commitments to reducing greenhouse gases beyond 2012. Therefore, removing new entrant rules should be considered for the phases of the scheme beyond 2012 where the situation vis-à-vis international competition can be reassessed. Alternatively, one can focus on a sound system design with no reserves and deal with outside competition by means of complementary measures outside the EU ETS.

There are, of course, options that fall between these extremes. One approach could be to reduce the scale of allocation to new entrants such that some allocation is provided, but this allocation is significantly less than needed. The second Guidance Document from the Commission states clearly that allocation to new entrants should not be directly according to need. However, currently most Member State approaches only constitute small reductions. Tightening the allocation to new entrants would make carbon costs a clearer consideration in investments, without scaring off investors completely.

Distinguishing between sectors

The paragraph above describes a compromise approach that falls in between providing a new entrant reserve with free allowances on practically an as-needed basis and the complete removal of the reserve. Such an approach will actually be ineffective without clearly understanding the investment decisions involved – which differ greatly between sectors and therefore the approach could still discourage some investors, and support more carbon-intensive investments. Therefore, the above approach could be elaborated upon further in order to make a distinction between sectors.

According to this more sophisticated approach, in sectors where outside competition is a serious concern, a new entrant reserve could be provided that still allocates below need, but not as significantly. For

sectors unaffected by international competition a much lower, or no allocation could be provided.

Such a split could be possible between the electricity sector on one side, and industry sectors on the other. However, particular attention would still need to be paid to the indirect effects that this distribution would have on industry through increased electricity prices. Alternately, particular industry sectors could be selected for specific treatment on the basis of their individual characteristics.

Highly differentiated approaches might result in complex systems, as observed during the NAP process, when multiple sectoral caps were used. The second Commission Guidance recommends a move away from complexity and therefore it is likely that either a straightforward differentiation should be used. Such a differentiation could be completely harmonised at the EU-level, or the Commission could recommend a few possible divisions for Member States to choose from, resulting in a partially harmonised approach across the EU-25, that recognises the differences between sectors.

On the other hand, differentiation at a Member State level would allow individual Member States to prioritise their own industry sectors as appropriate. In effect, this is what occurred in the first phase, where some Member States put the entire emissions reduction burden on the electricity-producing sectors. It is possible for such an approach to be clear and straightforward, even where rules are not harmonised. If there are concerns about complexity they could be dealt with.

It is important to note that the future shape of the EU ETS will have to be devised in parallel to any new international agreements on post-2012 commitments to greenhouse gas reductions. Therefore, the question of the international exposure of sectors will also have to be related to such agreements and the extent to which internationally competing sectors are likely to be protected by other countries.

Benchmarks could be important in determining the allocation to the sectors that installations would receive under a tighter proposal. Such benchmarks could be a combination of the emissions related to the use of best available technology reduced by a factor that represents the risk associated with the decision to e.g. build a new type of clean plant rather than an existing technology. The cost differential of investments, as well as costs associated with risk will be an important element to this reduction in allocation versus the benchmark, as will the anticipated



lifetime of the investment (done on a sectoral basis) and the length of the allocation period.

It is important to note that the development of such a calculation basis will be complicated, as even benchmarks themselves are difficult to devise and reach agreement on. However, the use of tight benchmarks in some sectors, and removal of the reserve in other sectors, could represent a sensible balance between competitiveness concerns and encouraging cleaner investment.

A decision to remove the new entrants reserve altogether will be tightly linked to the question of competition with countries outside the EU and therefore will relate to international climate policies of foreign competitors at that time, as well as other factors relating to international trade. As stated above, the decision could be made to choose a sound EU ETS design regardless of these competition concerns, and to deal with these through other mechanisms.

6.3 Alternative approaches to new entrants – auctioning or buying on the open market

The alternative approach to new entrants is for installations to obtain allowances via an auction or on the open market.

The auctioning approach means that investors have to consider the real cost of carbon when making new investments and therefore there should be some incentives to invest in clean technology, depending on the carbon price signals.

The use of an auction enables a Member State to still make an approximation of the national cap that includes growth. However, instead of distributing this for free to new entrants, it will be sold openly to any participant. This means that the environmental target of the system will be the same but the government will make a financial gain and industry will be paying the cost of carbon.

The relationship between new entrants and incumbents in terms of allocation will depend on the way in which allowances are allocated to incumbents under this scenario. The overall pressure of the system will remain equal and some might argue that it is appropriate that new entrants pay for (some of the needed) allowances, but not incumbents, as new entrants have more opportunity to invest in new, clean technologies. Alternately, it would also be possible for some of the

allowances that would have otherwise been distributed to the incumbents for free, to be distributed via an auction, alongside those that could have been a new entrant reserve.

The type of auction is explored further in an accompanying paper on auctioning.

If new entrants were to have to buy all of their allowances on the open market many of the same arguments apply. However, in this case, it could be assumed that Member States do not include growth projections within their caps at all, which would reduce the number of allowances in the market, increasing the environmental effectiveness of the system. At the same time, the absence of a growth factor in the caps would potentially raise costs for new entrants by restricting the overall number of allowances available in the EU in a way that does not account for new entrant development. If full growth projections (including growth coming through investment in new installations) were included in the development of a cap for incumbents, this could result in providing allowances to the existing installations beyond what might be determined appropriate by the constraints of the scheme, resulting in a windfall for incumbents as they sell these allowances to new entrants, unless these incumbents build themselves the new plants. Where the removal of the new entrant reserve leads to a reduction to the overall cap size, as compared to the case where an NER is included, it would be expected that the carbon price should rise and therefore encourage further investment in clean technology.

Both of these approaches would require new entrants to pay the full cost of carbon. This could cause competition concerns vis-à-vis countries outside the EU where climate policies are less stringent than in the EU. However, these competition concerns would exist primarily in the industries which face a high degree of international competition. This not likely to be the case for the power sector where investments will need to be made within the EU, and where incorporating the cost of carbon will result in a different investment decision being made rather than no investment being made. These competition concerns, where they exist, need to be balanced against the goal of the system to reduce emissions and encourage investment in clean technology by creating a market that accurately reflects the cost of carbon.

Conclusions

In the short-term to medium-term, some sort of new entrant and closure rules are desirable as a way to deal with the competition issues in relation to non-EU countries and above. However, the specific rules



should be designed in a way that is co-ordinated with decisions about the treatment of incumbents to ensure as fair a playing field as possible and consistent with the absence of those rules in the longer term.

In conclusion, a staged approach could be starting during with the third phase of the ETS where a view is taken to gradually reducing provisions over the phases that follow. Decisions to remove new entrant and closure rules must be made well in advance of the commencement of the relevant phase to ensure that industry is prepared for this change but must also be done as early as possible due to the long lifetime of investments in the EU ETS sectors.

Potential steps towards removal of the new entrants reserve

The Commission's potential role in relation to harmonisation is explored further in section 5. However, some other important decisions could be lead from the Commission. If the long-term goal is to remove the new entrants reserve altogether, some decisions could be possible in terms of moving stepwise towards this aim:

- Harmonisation – as explored in section 5., harmonisation of rules and approaches across the EU is an important first step towards the removal of a new entrants reserve, which is likely to be most successful if done across the EU simultaneously; Creation of EU-wide rules could be carried out in tandem with a move away from allocation based on need to new entrants, or in advance of such a step while national caps and allocation processes are maintained;
- Clear definition of the transition from a new entrant to an incumbent, clarifying how this would work from phase to phase (see section 6.4);
- A gradual reduction of the size of allowances to new entrants either step-wise from phase to phase (e.g. fully according to benchmarks in phase III, 75% of benchmarks in phase IV, 50% in phase V etc, or according to a gradual scale even within a phase i.e. 90% year 1, 80% year 2 etc.);
- A sectoral decision about the removal of the new entrant reserve thus e.g. removing the new entrant reserve for the power sector first, as it is less subject to international competition, and then gradually doing so for other sectors;
- NOTE (the following is based on the theoretical construct of the “correct size NER”): Where it is decided to allocate less than the fully determined allowances to the new entrants, a decision must be made on how their allowances would be added to the market within the total cap:

- Growth used to determine full new entrant reserve by country, or across EU and difference above allowances allocated for free to be auctioned;
- Growth including new entrants used to determine full cap, and excess not given to new entrant reserve, given to incumbents;
- Cap determined without new entrant growth beyond what is allocated, and therefore a further environmental benefit is achieved, at higher cost to new entrants;

6.4 The changing face of new entrants

The section above mentions the potential value of stating what happens to a new entrant in the phases beyond its initial entry into the scheme (as introduced in Section 3.3).

If an installation is a new entrant for only a few years (up to five under current plans for phases) and where new entrants are subject to a more stringent allocation process than incumbents, the long-term signal will be weak for investments with a long lifetime. For these investments, operators only need to factor the value of carbon fully for the first few years of the scheme, hoping to get a more generous allocation in the later years of the investment, with a general understanding that over time the EU-wide cap will have to shrink.

Therefore, either the signal must be sent that the approach to incumbents in terms of allocation is changing on the same terms as to new entrants, at the same rate, so that such an issue can be avoided, or new entrants must never be put into the same category as the original incumbents.

Under the second approach, each group of new entrants will maintain their allocation methodology as originally allocated to them as new entrants. This could introduce a level of complexity as each phase introduces a new category of "incumbents" with different allocation rules. On the other hand, such an approach would create clear steps towards full incorporation of the cost of carbon.

Alternately, an algorithm could be applied such that new entrants would become incumbents but phase I new entrants would only receive 90% of allowances of original incumbents, phase II new entrants only 80% etc. This approach could have the benefit of more simplicity than the first

approach, as not all allocation methodologies are retained, but would still create a step-wise move in the intended direction of the policy.

Obviously, the treatment of new entrants in future phases would be simplest if carried out in the same way across all Member States. This topic needs to be discussed in the context of the direction of the approach to incumbents in future phases.

The next section looks in more detail at the nature of closure rules and how these should be designed in tandem with new entrant provisions.

6.5 Closure rules

In terms of closure, there are two important design elements to consider. Firstly, the definition of closure has to be secured and then, once the plant closes, a decision has to be made about what will happen to the allowances.

There are several possible approaches to the treatment of these allowances – the Member State can decide not to issue them and cancel them instead, it can decide not to issue them and place them in the NER, or the allowances can be retained by the operator and potentially sold, banked or used for other installations of the operator. Operators planning to transfer production to another plant in the same, or even a different Member State, simply use the allowances for this other operation. The operator might be allowed to retain these allowances until the end of the year, when all the accounting for emissions takes place and the next year's portion is allocated, or until the end of the phase or even longer.

There are also several options in terms of the definition of closure – closure could include temporary or partial closure as well as full closure. A plant could be considered closed when it ceases operation altogether i.e. zero production, or when its production or emissions drop below a certain threshold (note that care must be taken in determining such a threshold as emissions can also drop significantly as a result of successful abatement measures, an effect that is intended by the EU ETS). In the first phase of the scheme it has been extremely difficult to regulate full closures, illustrating that both determining and regulating partial and temporary closures is likely to be extremely complex without adding a great deal to the goals of the scheme.

Here two options in relation to closure are presented in terms of the relationship with the approach to new entrants – in one case it is argued that, in as much as possible, closure rules should be modelled on new entrant rules in order to mirror the approach. The alternative argument is that there should be no closure rules at all, and closure should be treated as an abatement option itself.

The mirroring approach

The mirroring approach means that the definition of a closed installation (or one that is not closed but falls outside the scheme), for the purposes of receiving allowances under the EU ETS, mirrors the definition of new entrants as much as possible. Furthermore, the treatment of closed installations should also relate to the treatment of new entrants in order to create a balanced system.

Looking at the definition first, the mirroring approach argues that the definition of new entrants and closure should mirror each other. Under this argument, there are capacity limits that define a new entrant, and therefore any decrease in capacity below the relevant threshold should be interpreted as a closure for the purposes of inclusion in the scheme (the opposite of a new entrant or the opposite of an extension; note that this would add significant complexity to the scheme and could result in perverse incentives to run plants more fully). Threshold rules for closure and entry by these rules would be the same to ensure parity. The idea that no installation receives allowances for increased use of existing capacity would be mirrored by the fact that a general decrease in production in a given year does not lead to a reduction in allowances granted. Some allocation methodologies will, by default, create a mirroring approach, e.g. full auctioning.

In the first phase six countries (see section 4.2) have defined closure as the case where emissions drop below a certain percentage of the reference year emissions (e.g. 10%). This is to prevent companies that reduce production to nearly zero from claiming that they are in fact still in operation. However, this does not reflect the new entrant definitions which are based on capacity.

The purpose of the emissions threshold rule is to make it more straightforward to determine a closure in practice, and the purpose of the mirroring approach is to ensure fairness of treatment between operators. Experience from the first phase of the scheme will help policy-makers judge the likelihood that operators will attempt to take advantage of the system by pretending not to be closed. This will



highlight whether or not the emissions threshold rule is necessary or whether a mirroring approach will suffice.

It is important to note that although this discussion relates to a mirrored approach between new entrants and incumbents, it does in fact affect the equality of treatment between those outside the system and incumbents (that fall below the capacity threshold) as well as new entrants.

In terms of the treatment of closed installations, it could be argued that in order to preserve the fair distribution of allowances between installations, it is important that if new entrants to the system receive free allowances, then installations that are closing should lose their allowances. These allowances replenish the new entrant reserve and this redistribution help to ensure that allowances are allocated according to need (even if a reduction factor is applied). Allocations to closed installations cannot be based on need at all – as they no longer have any emissions. The argument in terms of fair distribution of allowances relates, in part, to the way in which the size of the NER was originally determined – if a net growth rate for the country was used, then it is important that the allowances from closures are recycled into the new entrant reserve. However, if the growth rate used in calculating the NER does not take into account closure, then it is not necessary for these allowances to be redistributed to new entrants, and they should, according to the calculations be cancelled.

This “mirroring approach” argument would lead to a situation where there are either rules governing both new entry and closure or no such rules at all. In most cases in the first phase such an approach was taken by Member States with allowances removed from closed installations and free allowances given out of the new entrant reserve.

The “no closure rules” approach

An alternative to the “mirroring approach” argues against closure rules, even where new entrant provisions exist. It is argued that closure is a legitimate greenhouse gas abatement option for plants and therefore, as is the case in instances where other changes are made to an installation, operators should be able to keep the allowances from closure and then be free to use them as the operator chooses e.g. sell them on the open market, bank, use for other plants etc.

It could be argued that this is an appropriate treatment for all types of partial or temporary closure, but is not appropriate in the case of full closure, as at this point the operator is no longer an operator at all.



Therefore, the operator should no longer be able to make an abatement decision. On the other hand, the reward for abatement under the “no closure rules” system will have to be delineated by some description of time. This could be the end of the year or it could, arguably, be the end of the phase, as this is the time period for which all other operators see the benefits, in terms of allowances, for their abatement decisions.

It is important to note that should allowances be awarded to a closed installation for a long period of time there may be legal concerns associated with the identity of the plant or operator receiving the allowances and associated with the status of the allowances e.g. government grant. In this context, it is interesting to note that the SO₂ trading scheme in the United States provides fixed allocations on a permanent basis, regardless of the plant lifetime.

The environmental integrity of the system is not damaged under this approach because the overall size of the cap remains constant, however it is the distribution of allowances that is affected. As discussed above, if the overall cap and NER are estimated in a way that assumes that allowances from closure will remain in the system, then the overall allowances in the system should still be appropriate to the scheme’s goals. This approach could result in a decrease in the market price of carbon, reducing the incentive for incumbents to invest in new technology. On the other hand, the number of allowances available to new entrants free from the reserve is lower than if these allowances were returned to the reserve and this could increase the incentive for investment in clean technology by new installations. However, this effect would be a small one, as the new entrant status will be limited to the length of the given phase and therefore such plants would have the opportunity to receive allowances at the next relevant juncture.

The closing installation can sell off the allowances it does not need for profit and this can be seen either as a reward for abatement, or as a windfall profit.

It is considered unlikely that decisions to close a plant will be taken on the basis of those benefits alone, although the scale of the value of the free allowances in relation to the value of production depends on the sector. Operators of installations all have core businesses on which they depend and closing down operations completely at an installation in order to abate emissions constitutes the end of their business process, rather than a legitimate abatement technique in the same way that reducing their emissions intensity in relation to production does. With

this in mind, it seems more appropriate to have closure rules that remove allowances from operators at some point after closure.

How long to wait?

Even where it is recognised that there are reasons to remove allowances at some point beyond closure, it could still be argued that there should be a long time delay between the actual closure and retention of allowances. Such an approach would encourage economic efficiency in the system, and would ensure that the value of allowances – which could be high in the case of closing plants that are heavy emitters – can be incorporated into the closure decision.

One proposal (Zetterberg et al¹³) is to update the allocations on the basis of historical emissions starting ten years after the initial allocation was calculated. Under such a system incumbent installations would have a base year of e.g. 2000-3 from 2005 until 2011, which would then be updated to 2001-4 from 2012 to a base year reflecting 2002-5. Closures would therefore lose their allowances ten years after closure, partial and temporary closures would be reflected over a regular period, and the value of the allowances could be factored into the closing decisions. New entrants could be given allowances free from a reserve (according to the rules set out at that time) and then, ten years after opening, would be allocated as an incumbent, as with the other updates.

Such a rule allows for installations to retain allowances on closure, but without creating a future where a pool of allowances will remain allocated to non-existent facilities, whilst others are extremely carbon-constrained.

It is important that such a rule is devised with an understanding, and alongside decisions discussed earlier in relation to a staged approach to the gradual removal of the NER. Furthermore, any relationship between allocations and the situation ten years previously has to be clear – both for new entrants and incumbents – such that it is not simply a needs-based relationship based on historical use and so that the relationship between new entrant allocation from a reserve is consistent with any updates.

The current system already calls for Member States to avoid updating allowances based on emissions information published in 2005. Therefore, it is already the case that there cannot be an update before 2012 – creating a system where a rough ten-year rule could be possible

¹³ The Ten-Year Rule Allocation of Emission Allowances in the EU Emission Trading System; Zetterberg et al. (June 05)

post-2012. Similarly, the rule could be created with a slightly different time lag – eight or twelve years. Some attention could be given to this specific question based on specific investment decisions that might be taken, particularly in the power sector.

Such a rule is powerful because it accounts for changes with time, and as described in section 5.4, could also allow for an implicit transfer rule. To a certain extent, such a rule gives clearer signals to industry – but, in itself, this is not the entire story.

The way in which allocation is derived during the update phase is important in order to avoid any of the potential negative incentive effects associated with an updating process. Such updates could, without the proper allocation methodology, effectively reward past increases in emissions in facilities at the expense of their more efficient counterparts, and without properly rewarding those who have invested in energy savings measures over that historical period. Furthermore, the inclusion of updating could cause more pronounced differences between the treatment of new entrants and incumbents as the new entrant reserve is gradually phased out. Again, such a discrepancy is highly dependent on the relationship of allocation to historic emissions i.e. the precise mechanism of the updates.

The ten-year rule proposed suggests simply shifting base years and then changing the accompanying historically-based allocation rules. It might also be possible to look at the structural changes only ten years previously (changes in capacity, equipment etc.) and then applying a benchmark. This approach would provide the same new entrant, closure and overall systems benefits, whilst at the same time allowing for allocation to move away from allowances based on historical emissions for incumbents to a benchmarked approach across the board. This approach would go some way towards addressing the challenges posed by updates.

It is likely that the application of such a rule would be more straightforward if taken at the EU level so that the signal to industry is strengthened.

The next section of this paper looks more closely at the details of the new entrant and closure rules, and the possibility of harmonising some or all of these rules across Member States.



7 ADVANTAGES OF HARMONISATION

Harmonising rules across the EU will prevent competition effects between Member States in relation to new entrants and will therefore ensure that investment decisions are not prejudiced towards one EU country as the result of an EU policy (see discussion of issues in section 5.1.2). A more harmonised approach will also make the investment environment in the EU clearer as opposed to the situation where there are different rules in each country.

A harmonised approach will assist companies who operate across several EU countries as there will be a basic model to follow. At the same time a harmonised approach will help governments in their discussions with industry, as industry associations will not be able to claim that “it is better in country x” but will remove some of the national sovereignty associated with the current national allocation plans. This could be seen as undesirable in countries where particular sectors have made a strong case for special treatment or where political positions on certain issues could determine the approach e.g. a Member State where auctioning is considered the correct approach regardless would be unwilling to harmonise allocation methodologies with a benchmarking approach.

There will be some areas where the decision to have harmonised EU rules might have to be balanced against the importance of having comparable rules for incumbents and new entrants if and when Member States retain the flexibility to determine rules for incumbent allocation methodologies in accordance with the existing criteria in the Directive.

Harmonisation is likely to prove challenging at the stage where agreement will need to be reached on approaches. However, this doesn't make it any less desirable from the perspective of sound system design.

In table 10 the elements of the rules are considered briefly in terms of their potential for harmonisation, considering some technical factors. It is important to note that this table is devised looking at the elements of the current system and therefore, by definition, makes the assumption that free allocation will continue. However, there are other more straightforward ways to achieve harmonisation in the system – and these are the concepts discussed earlier of removing new entrants and closure rules across the board.

The table below indicates that the decision to harmonise certain elements of the rules are likely to bring up more issues than others. In the section that follows the table, the options open to the EU, in terms of involvement with new entrant rules is summarised, and the pros and cons of harmonising individual elements is investigated in more detail.



Table 10 The advantages and disadvantages of harmonising certain elements of the new entrant and closure rules

Element of rules	Harmonised approach	
	For	Against
Definition of new entrant	Common signal to investors Harmonised eligibility criteria prevent competition distortions Prevents confusion to investors/companies investing in different EU countries	Current definitions based on timing of submission to the EU – this could be considered a sufficient degree of consistency and is logical – submission can be taken as the snapshot of “incumbents”
Free allowances	Largely prevents competition distortions in relation to new investments but this is dependent on the scale of allocations and could be seen as a disadvantage by some.	Strong links to, and implications for, approach taken to incumbents. ¹⁴ Loss of autonomy for Member States to send signals through these decisions.
Known new entrants	Helps avoid situations where individual installations negotiate allowances	Difficult to clarify the nature of “known”, varies for different sectors, sizes of installations etc. making harmonisation very difficult. Treatment varied in the first phase, this is mostly a question of informing growth rates behind estimating the size of a reserve of free allowances
Size of the reserve	Enables an EU-wide reserve Half-way approach, without an EU-wide reserve could involve defining how max/min	Difficult to estimate ¹⁵ - Need in individual Member State depends on national growth factors, or national models.

¹⁴ A harmonised approach to the choice to allocate free allowances to new entrants relates to whether or not incumbents are allocated free allowances (versus auctioning etc.) Therefore harmonising this area of new entrant rules implies the harmonisation of some of the incumbent rules as well.

Element of rules	Harmonised approach	
	For	Against
	relative reserves, or specifying how to determine the reserve size.	<p>May not allow national governments to establish a clear total EU ETS cap (NER + cap) that sends a signal to investors in relation to the national Kyoto or other targets (where EU-wide cap is used).</p> <p>National decisions in relation to burden-sharing between sectors may be affected.</p>
An EU-wide reserve	<p>Common signal to investors</p> <p>Aggregation of national estimates for reserve is a possible option.</p> <p>Should balance out inaccuracies in judging reserve size (but will not in cases where e.g. entire economic growth much greater than planned across entire EU). The uncertainty of the amount of new plants with an EU-wide reserve is lower as individual developments in 25 Member States going in opposite directions offset each other partially.</p> <p>Offers flexibility of investment when national reserves in some countries may have run out.</p>	<p>Difficult to estimate¹⁵ - Need in individual Member State depends on national growth factors, or national models (although there are also advantages see column to the left).</p> <p>An EU-wide reserve means that structure of the reserve must also be determined at an EU level such as the exclusion of certain sectors from being eligible for free allowances – this will not, therefore, take into account national circumstances.</p>

¹⁵ It is important to note that there is no inherent correct size of the NER, the accuracy of such a calculation is a relative one, and relates to the division of allowances between the incumbents and the new entrants (where free allowances are provided to both). In reality, both the size of the NER and the cap might be set on any given percentage of need, or not in reference to need at all.

Element of rules	Harmonised approach	
	For	Against
Structure of the reserve (i.e. ring-fenced portions and division of allowances over time)	Establishes clear links and common approach between other EU-level policies e.g. CHP Directive, and new entrant set-asides under EU ETS. Structure of the reserve i.e. decrease of free allowances with time over a phase of the EU ETS can send out common signals.	Allows choice a national level e.g. auctions coinciding with a decrease in allowances.
Allocating to installations	Prevents investment distortions between Member States Provides clarity to investors operating across the EU	Could relate to allocation decisions to incumbents, where made differently in different Member States.
Bonuses	Provides clarity to investors operating across the EU	Allows for choice at national level based on e.g. CHP penetration, early action.
Procedure for accessing the reserve	This would be necessary if an EU-level reserve is established. More straightforward for companies operating across the EU, lower transaction costs possible	
If and when to remove allowances on closure	If and when to remove allowances on closure affects the scheme in terms of environmental integrity if these allowances are cancelled. Sends a common signal to industry	Might be complex to harmonise due to national-level legislation.

Element of rules	Harmonised approach	
	For	Against
	Allows a consistency of approach in relation to new entrants, if new entrant definition is harmonised	
Deficit of allowances	Measures could be taken at an EU-wide level to address concerns about investment limitations through NER provision strategically where it is considered appropriate to do so through the scheme, rather than through other mechanisms.	In countries where models are less well-developed Member States may be concerned about how to cope with any inaccuracies. Concerns about e.g. security of electricity supply may be used to argue for a support mechanism in the case of a deficit. Difficulties especially likely to arise in countries with high and uncertain growth rates.
Surplus of allowances	Reduces potential for national governments to use new entrant reserve as a loophole and gain a competitive advantage (depends on the rule which is used – may result in common loophole)	
Transfers on closure	Common signal to industry across EU	Technically difficult to measure ex-ante ¹⁶ , and to

¹⁶ Ex-post adjustments to allocations are not allowed. In the case of transfer there would therefore need to be an ex-ante assessment of the transfer of production to a given facility. This would have to be based on a variety of documentation e.g. business plans etc, these intentions are more difficult to verify than traditional

Element of rules	Harmonised approach	
	For	Against
		ensure that transfers go to a technically linked installation (assuming that the harmonised rule allows transfers)
Lead time on decisions	Clarity for industry	May have practical difficulties in terms of data collection across EU – some Member States slower than others Capacity in government for decision-making and producing these decisions can be very varied (depending on size of Member State and environment department)
Overall	Common signal to investors Avoids many areas of competition distortion	Does not take into account national circumstances. Incentives for clean technologies can be set with other instruments.

new entrant assessments e.g. plans to build a new installation of a given capacity. The degree of difficulty depends on whether or not transfer is linked to an extension of an existing facility (in which case the assessment would be easier) or is based on transfer to an existing facility with excess capacity.



7.1 Harmonisation options

In the table above, the advantages of harmonisation of new entrant rules were given generally as being a reduction in competition distortions and increased clarity, and possibly simplicity from the industry perspective. A key disadvantage of a harmonised approach is that it doesn't allow for the incorporation of national circumstances, or targeted incentive systems within the policy-making framework. Consistency of approach with respect to incumbents was highlighted as further disadvantage, or challenge that harmonisation poses.

The Commission can propose the legislation that determines the level at which it engages with new entrant rules in the future phases of the EU ETS. These are presented as packages of harmonisation because several of the elements of the rules, as shown in Table 10 above, are highly interdependent. These are not incremental – adopting the third package is not dependent on adopting the second.

In this context it is important to note that the easiest way to achieve harmonisation at EU level is to remove the reserves, and closure rules completely, as this approach would not require a raft of follow-up decisions on design aspects of the NER. Section 4 outlines the advantages and disadvantages of this approach more clearly.

Furthermore, these harmonisation approaches have been devised with a view to the current functioning of the EU ETS. Options such as the removal of the NER altogether, or serious reductions in the NER allocations when compared to need, either across the board, or in a sector-specific manner should certainly be considered in the future. Such approaches might be required even more acutely in the light of any future agreements on climate change constraints made post-2012 at the international level.

Even where the “no reserve” or “reduced allocation” approach is to be taken – the role of the EU, and need to take a staged approach to achieving consistency across Europe on these issues will still hold true. The Commission could certainly consider making recommendations that the scheme should be harmonised at this stage in order to avoid being trapped in the current model of new entrant and closure treatment and moving forward to a more straightforward scheme (e.g. see the suggestion of a rule book) both in the medium and long-term.

Potential packages of harmonisation are listed below, and have been considered in the light of the current model of a NER.

- **No further harmonisation:** The Directive maintains the flexibility for national decision-making in new entrant and closure rules as currently given;
- **Harmonising overall approach:** This involves harmonising some of the rules relating to the approach to new entrants in a package containing some or all of: definitions of new entrants and closure, transfers upon closure and how to treat allowances in the case of surplus or deficit;
- **Harmonising the allocation methodology:** This approach involves harmonising the allocation methodology to new entrants, and possibly also the use of bonuses;
- **Harmonising the size and structure of the reserve:** In this option, some elements are harmonised and either guidance is given on how to determine the size of the reserve and how it should be structured, or an EU-wide reserve is set up. This option also explores the possibility of a pooled reserve that each Member State can opt into.

Each of these options is now investigated in turn, drawing upon the information in Table 10, in terms of the benefits and disadvantages of such an approach.

7.1.1 no further harmonisation

Under the no further harmonisation option, the Commission would leave the approach to new entrants and closure rules unchanged. This approach would mean that the Commission would still have an impact on the approaches taken by Member States through:

- The Directive;
- The guidance documents, used to the same extent as in the first phase;
- The review role of the Commission in relation to the NAPs; and
- Any further guidance.

The guidance document, as well as any further guidance could be used to produce, for example, a common reporting format such that the different rules taken by Member States would be more transparent. The second guidance document already contains such a reporting format, but it could be elaborated upon further. However, for this option it is not proposed that the guidance document would make any strong statements about harmonised approaches or methodologies.

The no harmonisation approach, if it involved some further guidance, could still make improvements in relation to clarity to industry and would have the advantage of providing Member States with the ability to use the new entrant rules in a way that is relevant to the national context.

On the other hand, this approach would not do anything to tackle the potential competition distortions between Member States that may result from the range of approaches to new entrants and closures in the first and second phase.

7.1.2 Harmonising overall approach

Under this option, some core definitions and approaches could be harmonised. This package would result in increased clarity for industry and would also take some steps to reducing the competition distortions caused by having different rules.

The elements of the rules that could fall into this package are investigated in turn below.

The definition of new entrants

The definition of new entrants can be divided into two elements, the description of a new entrant in terms of sector, activity and levels of production¹⁷ (where relevant), and the timing of the change i.e. when to make a division between new entrants and incumbents.

In this package a high priority should be given to harmonising the definition of a new entrant in terms of eligibility for free allowances, as eligibility has a strong bearing on competition between Member States. Eligibility has already been harmonised to a certain extent through the Directive and accompanying guidance, but any discrepancies from the first phases should be tackled in this package. In the first phase the UK included some sectors as eligible for new entrant reserve e.g. increase in good quality CHP capacity, which were not used in other countries. It is this type of difference that should be investigated, albeit valid under the optional criterion 8 on clean technologies.

Harmonising the date, in terms of the timing of a new entrant, has a lesser bearing on competition between Member States, and therefore it is less imperative that this is harmonised. However, harmonised timing

¹⁷ This level of production refers to the activity thresholds described in Annex I to the Directive which also indicates the threshold for inclusion as an incumbent.

would make the approach to new entrants clearer across the EU. In the first two phases there was a harmonised approach – the date of submission of the draft NAP to the Commission, however this led to a variety of actual dates across the EU.

If the aim of harmonisation is to achieve consistency, then it is logical to choose an approach that results in a consistent date across the EU – this could be chosen as the date that NAPs are due for submission to the Commission (rather than the date notified, which could be earlier) – or a certain amount of time earlier than this to give countries some lead time to collect data. It is important that information is provided about the new entrant treatment and incumbent treatment at the same time, with the same degree of certainty to prevent unequal treatment between these two parties. However, if this is the case, there is no reason not to choose a slightly earlier cut-off for the new entrant/incumbent boundary in the interest of the ease of collecting data. To this end, in practical terms, it is likely that the date of actual submission of the NAP will be ideal for governments in terms of the ability to provide the most up to date data.

Definition of known new entrants

The concept of known new entrants was used by Member State to facilitate the estimation of new entrant reserves, or the overall cap (where known new entrants were treated as incumbents). In some cases known new entrants were able to negotiate their allowances on the basis that they were a planned investment. Harmonising this concept is less of a priority in terms of the goal of reducing competition distortions and, provided this knowledge was used to inform growth rates or the size of the reserve, this should have no undue influence on the environmental integrity of the scheme.

Definition and treatment of closures

As with the allocation of free allowances to new entrants, the removal of allowances from closed installations could also have a bearing on competition between Member States. However, it could be argued that closure rules are less important in closure decisions (i.e. which Member State should a company close an installation in) than new entrant rules are in investment decisions (i.e. which Member State should a company invest in).

However, although closure rules have less of an impact on competition, it could be important to include harmonisation of closure definitions within this package to ensure a clear signal to industry and a consistency of approach in relation to new entrants. The harmonisation of treatment

of allowances on closure could also help limit the extent to which installations could receive windfall profits on closure. This relates to the discussion of the relationship between new entrant and closure rules as discussed in section 4.2.

Transfers of allowances on closure

This special type of closure has the potential to have a greater effect on competition between Member States than straightforward closure, as a transfer situation implies a re-investment. Consistent closure rules will prevent incentives to re-invest in one Member State over another and will also send a clear signal to industry operating across the EU.

A common approach to transfer could include not allowing any transfer rules. Alternately, some harmonised transfer rules could be developed.

Ex-post adjustments to the allocation of allowances are not allowed. In the case of transfer there would therefore need to be an ex-ante assessment of the transfer of production to a given facility. This would have to be based on a variety of documentation e.g. business plans etc. These intentions are more difficult to verify than traditional new entrant assessments e.g. plans to build a new installation of a given capacity or extend an existing installation. The degree of difficulty depends on whether or not the transfer is linked to an extension of an existing facility (in which case the assessment would be easier) or is based on transfer to an existing facility with a degree of excess capacity at the outset. It is important to note that transfer to an existing facility with excess capacity only is an ex-post adjustment.

Dealing with a deficit or surplus of allowances in the reserve

Harmonising these approaches is quite important from a competition distortion perspective. A common approach to deficits in a reserve will prevent concerns being raised by some Member States when other governments want to buy allowances for their industry.

On the surplus side, a common approach would reduce the potential for governments to use extra allowances to make money (by auctioning) in a way that is different between countries.

The approach to deficits may be important to investors looking at options in various Member States several years in advance, and therefore a common approach provides clarity, as well as tackling competition issues.



It may be difficult to achieve a common position on these factors. In particular some countries may have used their treatment of surplus allowances in a way that relates to the accuracy of the growth estimates behind their new entrant reserve size (e.g. cancellation of allowances in Malta or Cyprus where no growth is expected, but still, provision is made).

It is important to note, however, that in a post-2012 world international commitments may be such that the overall EU ETS cap, and therefore NER size, will be reduced very much beyond the concept of need. Thus the concept of surplus and deficits may no longer be relevant. However, it may also be the case that with a reduced overall size of the NER, allocation methodologies will be such that allocations to individual installations would also be reduced proportionately. As a result, the concept of sufficiency would relate to all applicants receiving some allowances rather than all applicants receiving enough allowances.

The overall package

The “harmonised approach” package, made up of some or all of the elements above would go some way to tackling competition issues, and would also increase clarity to industry.

7.1.3 Harmonised general allocation methodology

Under this approach, the Directive would harmonise the allocation methodology that determines how many free allowances a new entrant would get¹⁸ or, indeed, if an auction would be used or they would need to buy on the open market. This approach could be taken with, or without, “harmonised approaches” as defined in the package above.

Harmonising the size of the allocation to individual new entrants would tackle one of the greatest competition distorting elements of the new entrant and closure rules. This would provide clarity to investors, and could also play a role in providing clearer long-term signals, and would prevent industry making claims that they would be better treated elsewhere in the EU.

The relationship between allocation to incumbents and allocation to new entrants might be an area that poses difficulties. In cases where countries chose an allocation methodology for new entrants specifically

¹⁸This harmonisation could take place at various levels – at the basic level deciding on the approach i.e. benchmarking and the degree to which non-standard elements can be included. And then some of the standard elements could be set at the EU-level e.g. potential reduction factors. The benchmarks themselves could vary from Member State to Member State.

to reflect the approach to incumbents, the EU-wide harmonised approach might disturb this equality. Furthermore, as new entrants become “new incumbents” in future phases, they could then be subjected to different allocation methodologies according to their Member State.

Furthermore, any common allocation approach would have to feed into calculations at the Member State level of the size of the reserve (in the cases where a bottom-up approach has been used based on a proportion of need). The relationship between the size of the reserve and the allocation methodology could be a source of further disagreement when attempting to find a standard approach.

Even where allocations are to be set well below need e.g. 50-75%, as a result of future climate change policy constraints for example, accuracy in calculations of these relative relationships will remain important and contentious.

Bonuses to new entrants may be part of the allocation methodology at the installation level. These too could be harmonised within this package in order to reduce competition distortions that occur when a new entrant in one country receives more allowances than in another.

However, bonuses allow governments to incentivise particular clean technology approaches that are specific to national circumstances. This type of flexibility is a legitimate area where a level playing field is not expected and could relate to a country’s own CHP targets, early action profile or other elements. Therefore, the Commission could propose to harmonise the allocation methodology and define a distinct number of areas where a bonus system, with the approval of the Commission, might be seen as acceptable.

Note that a harmonised methodology might still allow for national level benchmarks which would allow for individual Member States to further incentivise clean technology in that way.

An EU rule book

A more comprehensive approach could be taken under this heading that combines the harmonised approach and harmonised allocation methodology to create an “EU rulebook” on new entrants, closures and transfers. This would be a helpful way to significantly reduce the potential distortions, as well as to improve long-term signals to industry.



Such a position would also facilitate moving towards a situation where there are no free allowances made available for new entrants at all and could incorporate interim stages to reaching this aim where the allocation to new entrants is a certain percentage of need.

A rule book such as this may be considered helpful from a Member State and industry perspective because it would be clear what is acceptable, and what options exist, yet at the same time provide flexibility at a Member State level. The use of the rule book could be voluntary or mandatory, or the intention could be that at a given point in the future it would be mandatory. It may also be the case that the rule book could be mandatory but Member States could apply for (temporary) deviations from (certain aspects of) the rule book subject to Commission approval.

The rule book could add a time dimension into the options. This approach will only be possible if the international situation in relation to post-2012 climate targets is clear. However, in theory, the rule book could set out the acceptable rules for a series of phases. E.g. 2013-2017 NERs will provide free allocation using benchmarks, 2018-2022 the allocation will be according to such benchmarks but with a factor of 75% applied to sectors not facing international competition and 90% to those that do; post-2022 no new entrants reserve. Such an approach will add increased certainty to industry in a way that still allows for short allocation periods (which is helpful in terms of projection accuracy) and will also for clear strategic planning of the scheme's future.

7.1.4 Harmonising the size and structure of the reserve

This approach could be taken on two levels – making EU guidelines about how to determine the size of the reserve and how it should be structured, or the establishment of an EU-wide reserve. Under the first approach governments would fit some national statistics into a formula in order to determine the size of the reserve, and in the latter case, the Directive could specify and the Commission (or a specialised agency) administer the reserve. Should an EU-wide reserve be set up, then it would be important to ensure that the size of allocations removed for investments in different Member States was carried out in a manner that was equitable – ensuring that similar investments in different countries were treated comparably as the pot is equally accessible to all new entrants. The other new entrant, closure and transfer provisions might also need to be harmonised, or at least controlled, in a way that ensures that all of the interactions with the reserve (eg. the size of allocations taken out, and the scale of the return) is equitable.

The simplest way to ensure this equity might be to harmonise all of the other elements of the rules at the same time as an EU-wide reserve is created. Otherwise, other means could be devised to ensure that there is a level of equity (such as the rule-book or other partial harmonisation ideas explored earlier).

Firstly, elaborating on the table above, the general advantages and disadvantages of harmonising the size of the NER is investigated, and then the difference between the two options is explored.

It should be noted that the size of the reserve, in combination with the treatment of allowances in the case of a surplus or deficit, will affect the signal sent to industry about the availability of free allowances in general over time. However, the size of the reserve has less of an effect on competition between Member States than the allocation methodology to individual installations.

This assumption is made because the size of the reserve will only affect investment decisions between Member States where it is expected that one reserve is more likely to run out before another. Experience from the first phase shows that most countries attempted to build a reserve on the basis of need, or beyond need, (although serious cuts to overall caps were made in the Commission's Decisions, which may have had an indirect impact on the size of reserves) and therefore investors would have to make a very complex calculation to isolate that investment in one country is better than another during a certain phase of the EU ETS. According to this argument, there is less of a case for harmonisation of the size of the reserve than for harmonising other elements, in terms of competition effects.

However, harmonisation removes the ability of national governments to choose to send strong signals, through the use of a small reserve to industry to encourage the use of clean technology in new developments. Governments use the total EU ETS cap (including the reserve size) as a signal to investors about the use of clean technology. The size of the cap is also the result, not only of growth and need estimates, but also the country's approach to sharing the burden of making greenhouse gas emissions between different sectors – EU ETS and non-EU ETS sectors.

Two possible approaches to the harmonisation of the new entrant reserve are explored here:

A common template for determining the NER; or

An EU-wide reserve.

A common template for determining the NER

If a template approach is used, then some of the key national elements behind individual reserves will be retained – i.e. national growth rates could be inserted into a common formula. However, this approach still prevents a government from determining the size of the NER using various other national inputs based on e.g. penetration of clean technologies, distance to Kyoto target, and burden-sharing between sectors. These factors will be revised in the light of post-2012 commitments, in whatever form they will take. It is possible that if there is one EU target, and now burden-sharing split, harmonisation at the EU-level will be more straightforward in these aspects.

It could be challenging to formulate a common approach in terms of how the size of the NER should relate to growth rates.

Also, different countries have used different sources as their estimates of growth for the future. As a result, some might argue that a common template is not appropriate as the inputs are not comparable.

The use of a template would allow for a structure to be put into place to avoid double-counting due to the growth estimates used in the NER. There is a potential risk of over-allocation (double-counting) between growth rates for incumbents and the NER, especially when growth rates are set by the incumbents themselves. Harmonising the allocation to new entrants is only part of this equation, as the risk of double-counting is very dependent on the way in which incumbent allowances are allocated. It is therefore very difficult to use the new entrant rules alone as a way to avoid double-counting without also tackling the growth rates used in incumbent allocations. This argument holds where allocations are based on need or as a proportion of need.

EU-wide reserve

Formulating an EU-wide reserve entails all the benefits and disadvantages of harmonisation as set out in Table 10. The use of an EU-wide reserve would probably lead to administration of the reserve at the EU level, and therefore, most logically, although not necessarily, harmonisation of all of the other new entrant and closure rules.

It would be challenging to establish the size of an EU reserve, although no more so than accurately establishing a reserve at the national level. The EU-level reserve could also be done through the aggregation of national reserve estimates and with input from relevant sectors in order to gain agreement on the size. Were this approach taken, the use of an EU-wide reserve could allow inaccuracies relating to estimates of need at

the national level to balance out with “other country’s reserves” providing further allowances when the original country’s reserve may have been exhausted in the model of separate reserves. This approach, combined with harmonised treatment of surplus or deficit allowances could provide greater environmental effectiveness (depending on decisions taken about the overall size) than a scheme where decisions are made at the Member State level.

It is important to note that the accuracy in determining the reserve is only important in a system where the number of allowances made available is intended to roughly match with the need. In future phases there is likely to be a considerable constraint on the overall cap, and therefore also on any reserve. As the reserve is decreased well below the level of need, the complexity of the calculation of the size of the reserve is reduced. The most important elements that will remain are the assessments of growth and the proportion of this growth that should be eligible for allowances from the reserve. These figures will determine the division of a reduced cap between incumbents and new entrants.

In a model where the degree of free allocation to new entrants might be reduced more significantly, or not provided at all, for some sectors, this division of growth and apportioning between sectors will remain an important calculation. Compiling such information and amalgamating it at the EU-level, however, need not be significantly more complicated than doing so at the individual Member State level.

An EU-wide reserve would offer increased clarity to investors and would ensure that where, otherwise, a reserve might run out in one country before another, in this case investment in any Member State is an equal risk. Centralising the administration of the reserve would allow policy-makers to focus on the role of competition outside the EU, rather than having concerns about market distortions within the EU.

The use of an EU-wide reserve would not allow national governments to send out any signals to investors on the basis of specific national factors, especially the direction in which they hope emissions will go in order to meet national targets¹⁹.

The centralisation of an EU reserve would potentially involve the harmonisation of some policy elements that are currently left up to the Member States to decide upon. Examples include the basis for allocation from the reserve and whether or not any allowances retained on closure

¹⁹ This depends on the approach to greenhouse gas emissions taken internationally and within the EU post-2012.

are put into the reserve. Some elements could remain up to the Member State for determination such as restricting access to the reserve to certain sectors only. Such harmonisation overall would have to be carried out in the light of Member State directions on allocation to incumbents – closely linked to allocation to new entrants.

Having said this, there are several ways that a partial EU-wide reserve option could be implemented:

- each Member State decides on its own how many allowances to pay into the EU NER, rather than relying on a central determination. This has the benefit of retaining a degree of autonomy in carrying out growth estimates etc. but has the other advantages of a harmonised approach stated above;
- rules are set at EU level, but the implementation is done in such a way that each Member State applies the rules to determine the amount of allowances for each new entrant in its territory and requests to the EU NER administrator to allocate them. This approach has the appearance of a national scheme, but apart from the administrative work to be carried out at a national level, this is still essentially a centralised, harmonised approach;
- rules are partially or totally determined at national level and the only element of the EU-reserve is a common pot of allowances. This is the opposite of the “EU rule book” approach proposed in earlier sections and provides a level of national autonomy in incentivising approaches, but reduces administrative burden to a certain degree and has the benefit of added environmental integrity through the potential disposal of unused reserve at the EU-level. This approach could lead to serious market distortions if Member States’ rules allocate a greater proportion of the EU NER allowances to their own installations at the cost of others in the EU, hence a certain limitation in rulebook style may be needed as a complement;
- A centralised reserve of EU allowances, administered centrally is available for Member States to opt into, but is not obligatory.

7.2 Conclusions about harmonisation

The Commission has a choice about the level at which to harmonise new entrant rules and provisions. The case presented here shows strong arguments in favour of harmonising certain elements of the approach and allocation to installations post-2012. However, a fully harmonised approach in relation to size of the NER, such as that implied by an EU-wide reserve may take longer to reach agreement upon as it may involve harmonisation beyond new entrant and closure approaches (i.e.

at the level of the national cap). Although Member States have expressed a great degree of interest in increased harmonisation, it is not yet clear how widely harmonisation of national caps will be embraced.

A rule-book approach might be a good way to reduce complexity and concerns about distortion of the market whilst setting out long-term signals and even stimulating a shift in approach from the current rule structure.

In the longer term the clearest and most straightforward approach would be to remove the new entrant reserve and closure rules altogether. This approach would constitute harmonisation, and could also be carried out using a staged-approach.

Decisions on harmonisation could include the introduction of a ten-year (or equivalent rule) that updates allocation on the basis of changes to installations after a time lag (and would relate strongly to rules for incumbents, see section 6.5). This type of approach could be led centrally or be encouraged from the EU, with details determined at the Member State level.

In all of these decisions, the actual size of allocations (ranging from 0 to 100% of need) will need to be taken with careful consideration of international commitments to climate change post-2012.

Harmonisation rules that relate to new entrants must be taken in tandem with harmonisation of other EU ETS rules relating to incumbents to ensure an equality of treatment. Furthermore, harmonisation decisions must be taken bearing in mind the principles of achieving a lower carbon economy with minimal disruption to competition.



8 SUGGESTIONS FOR FURTHER WORK

This report provides an overview of the various issues relating to new entrants, closures and transfers as raised by the current EU ETS in practise, as well debates about the future phases of the scheme.

The development of the post-2012 EU ETS could be informed by further work on the area of new entrants and closures, especially in understanding the precise impact on investment decisions that these rules have and could have.

Some proposed areas for further work are:

- Worked examples of real closure, new entrant and transfer decisions from the first phase across sectors to understand the impact of these rules and the impact of potential changes to the approach to new entrants and closures;
 - A mapping exercise of the long-term future of the scheme to devise a clear route map of approaches to both incumbents and new entrants/closures that could work in tandem;
 - Developing and understanding of the areas in which international competition is felt most acutely in terms of new entrant and closure rules; and
 - Further work on the indirect impacts of the EU ETS through electricity prices will be important in informing decisions to treat the electricity sector differently. Similar work might be necessary in other sectors to underpin sectorally differentiated approaches.
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