EU EMISSIONS TRADING SCHEME (EU ETS) - PHASE II (2008-2012)

NEW ENTRANT RESERVE AND CLOSURE

FULL REGULATORY IMPACT ASSESSMENT
FEBRUARY 2007

1. TITLE OF PROPOSAL

1.1 This Full Regulatory Impact Assessment (RIA) is concerned with Phase II of the EU Emissions Trading Scheme and sets out options for changes to the new entrant reserve and closure policy for Phase II of the EU Emissions Trading Scheme (EU ETS).

1.2 The general approach to the second phase of the EU ETS is described in the overarching RIA, available from: http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/index.htm.

2. PURPOSE AND INTENDED EFFECT

2.1 Objectives

2.1.1 The EU ETS forms an integral part of the UK and EU's strategy to tackle the challenges posed by climate change. The broad objective of the current EU ETS is to reduce greenhouse gas emissions from installations and activities covered by the Scheme in order to meet obligations under the Kyoto Protocol. In general terms the objective of phase II of the EU ETS is to build on Phase I of the scheme and move towards a more efficient system so that Kyoto commitments can be met at least cost.

2.1.2 The Government's specific aims for Phase II are to:

- Learn lessons from Phase I and address any anomalies or gaps that may have arisen from implementation in the first phase:
- Create as level a playing field as possible for industry through harmonisation with other Member States;
- Look at the scope to include further CO_2 emissions from existing sectors; and
- Reduce the burden on small emitters.

2.1.3 The Government's Phase II objectives for the new entrant and closure of installations policy are to:

- ensure that firms take the cost of carbon into account when making investment decisions;
- maintain the attraction of UK for new investment;
- ensure that the EU ETS scheme does not act as a significant barrier to entry for new firms, which might arise from the differential treatment of new entrants and incumbents;
- encourage the take-up of cleaner technology (e.g. combined heat and power);
- reinforce energy security of supply; and
- Signal the Government's long term aim to move away from free allocation of allowances

2.1.4 Emissions trading gives industry a clear incentive to reduce carbon emissions, whilst enabling it to do so at least cost. When the Government considers EU ETS measures it does so in a way that is consistent with the principles of better regulation and will look to achieve its objectives with the minimum additional regulatory burden, taking on board the work of the Better Regulation Commission (previously the Better Regulation Task Force). Evaluations of individual policies will also consider options for simplifying the regulatory landscape as well as ideas for reducing administrative burdens.

2.2 Background

The EU ETS

2.2.1 The EU ETS is central to the Government's[1] long-term policy to reduce CO_2 emissions; its overall objective is to provide clear incentives for investment in energy efficiency and cleaner technology at lowest cost. More information on the background of scheme can be found at: http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/index.htm.

2.2.2 An important element of the EU ETS is how new entrants to the scheme are treated and the allowances they are allocated. At the highest level, the two main options are either to put aside a certain number of allowances from the overall total of allowances to allocate free of change to eligible new entrants, or to require new entrants to buy all the allowances they require from the market.

[1] The EU ETS is a devolved matter, so when the term Government is used in the RIA, it covers the UK Government and the devolved administrations of Scotland, Wales and Northern Ireland.

2.2.3 In Phase I, a proportion of the total allowances allocated in the UK were set aside for free allocation to new entrants[2]. The Phase I New Entrant Reserve (NER) comprised 46.8 million allowances (6.3% of total allowances). Part of the NER (13.9 million allowances) was ring-fenced for use by Good Quality Combined Heat and Power (CHP) new entrants only. The value of allowances in the Phase I NER is in the region of €0.23 - €1.87 billion[3]. The majority of allocations from the NER in the first 18 months of Phase I have been less than 100,000 allowances, as shown by Table 1.

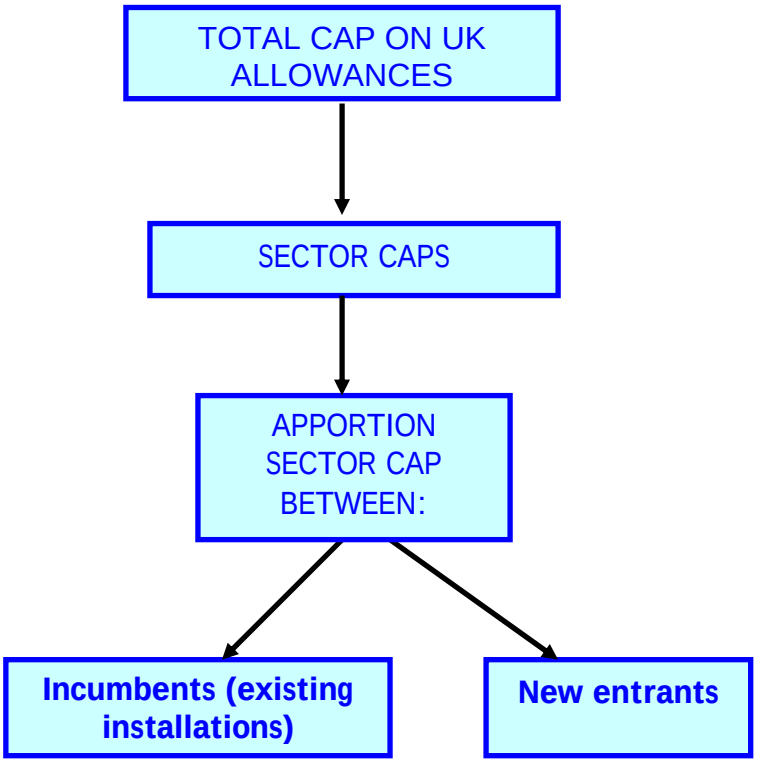
Table 1: Size distribution using Phase I allocations

Number of allowances allocated	Number of installations (percentage of total)
1 – 49,999	63 (53%)
50,000 – 99,999	25 (21%)
100,000 – 249,999	11 (9%)
250,000 – 499,999	8 (8%)
500,000 – 999,999	4 (3%)
1 million – 5 million	6 (5%)
More than 5 million	2 (1%)
Total	**119**

[2] defined as installations that began operations, or increased capacity, after 1 January 2004.
[3] This RIA uses an estimated price range of €5 - €40 per tonne of CO_2,

2.2.4 The process for funding the NER is summarised in Figure 1. The total number of allowances to be allocated in the UK (the UK cap) is decided on and is then split amongst the EU ETS sectors ("sector caps"). Allowances are deducted from the sector caps to fund the NER; the remaining allowances are then allocated to incumbent installations.

Figure 1



2.2.5 For Phase II, sector caps will be set in accordance with sectors' projected business as usual (BAU) emissions - apart from the Large Electricity Producers (LEP) sector[4]. Each sector's emissions projections include provision for new entrants as the output growth assumptions that they are based upon relate to demand for a particular product, without regard to whether it has been produced by increased output at existing capacity or output from new capacity. A proportion of the emission projections used to calculate the sector caps therefore relates to emissions of projected new entrants.

2.2.6 Eligible new entrants may apply to the relevant regulator requesting allowances from the NER. The regulators apply the new entrant rules and calculate the quantity of allowances that the applicant would be eligible to receive (based on data provided by operators in their application).

Closures

2.2.7 One element of the EU ETS that is closely related to new entrant issues is what happens to an installation's allocation when it ceases operation. At the highest level, the two main options for installations that close permanently within a phase are either to issue the allowances only for the year in which closure occurs, or issue the allowances for the rest of the phase.

Simplification and Better Regulation

2.2.8 As noted in paragraph 2.1.4 above, the policy-making process reflects the Government's commitment to the Better Regulation Agenda and offsetting simplification measures have been considered throughout the development of policy options.

2.2.9 The Government has, wherever possible, sought to streamline the existing scheme and simplify the methods of distributing allowances to both existing and new installations. Although this RIA contains a number of complex policy options, it should be noted that these would not result in additional complexity or administrative burdens for operators in terms of compliance. The options reflect Government's consideration of the most appropriate methods to distribute allowances (and therefore high value financial assets) in the most equitable way.

2.2.10 The Government is seeking to reduce the complexity of the rules on the allocation of allowances from the NER by proposing that only extensions which result in direct emissions should be allocated allowances (see paragraphs 5.4.11 – 5.4.14 below).

[4] The LEP sector's allocation will be below projected BAU emissions – the allocation will be set to cover the difference between the total UK cap and the projected emissions for all sectors covered by the EU ETS.

3. CONSULTATION

3.1 Within Government and the Devolved Administrations

3.1.1 The overarching Phase II RIA contains details of consultation within Government and the Devolved Administrations.

3.2 Public Consultation

3.2.1 The July 2005 consultation document on Phase II issues sought views on the NER. For further details on public consultation and stakeholder engagement in developing Phase II policy, please see the overarching Phase II RIA.

3.2.2 In March 2006, the Government consulted on a draft policy National Allocation Plan for Phase II. Specific questions were asked about the rate of allocation to new entrants (Decision 2); the subtraction of the NER (Decision 3); eligibility for allocations from the NER (Decision 4); the rationalisation rule (Decision 5); and the treatment of surplus allowances (Decision 6). The results of the consultation on these issues are discussed in the relevant section of this RIA.

4. OPTIONS

DECISION 1 WHETHER TO HAVE A NEW ENTRANT RESERVE

4.1 The two high level options are to put aside a certain number of allowances from the overall total of allowances to allocate free of charge to eligible new entrants (an NER), or to require new entrants to buy all the allowances they need from the market.

Option 1	Have an NER
Option 2	Do not have an NER

DECISION 2 RATE OF ALLOCATION TO NEW ENTRANTS

4.2 In Phase I, allocations to new entrants were calculated by applying standardised benchmark spreadsheet allocation methodologies to application data provided by operators. Allocations to new entrants in the LEP sector were subject to the same reduction in allocation (14%) as allocations to LEP incumbents. Non-LEP new entrants were subject to a 0.7% reduction to finance part of the CHP set-aside (see paragraph 2.2.5).

4.3 The Commission's guidance on Phase II recommends that new entrants should not be allocated at projected need. In Phase I, new entrant allocations were calculated on the basis of the need of the most efficient new entrant ("best available technology") rather than the projected need of the new entrant. The Government has considered the following allocation rates for Phase II:

Option 1	100% (i.e. at best available technology)
Option 2a	95% for all new entrants
Option 2b	95% for all new entrants, with the following exceptions - 100% for CHP new entrants; LEP new entrants subject to same cut as LEP incumbents; new entrants that are boilers allocated at 90%
Option 3	90% for non-CHP new entrants
Option 4	70% for non-CHP new entrants

DECISION 3 SUBTRACTING THE NEW ENTRANT RESERVE

4.4 In Phase I, the estimated allocations for each sector's new entrants were taken from the estimated total emissions for the sector. In assessing the options for Phase II, the Government has taken into account the extent to which options treat sectors equitably and recognise the difference in development time for new entry for different sectors. The Government has considered the following options for Phase II:

Option 1	A flat rate NER deduction across all sectors
Option 2	Take sector specific contribution from all sectors
Option 3	Take a sector specific contribution for some sectors and a flat rate for other sectors

DECISION 4 ELIGIBILITY FOR THE NEW ENTRANT RESERVE

4.5 The UK's Phase I National Allocation Plan sets out the types of installation that are eligible for a free allocation of allowances from the NER. They are:

- New installations that that come within the scope of the EU ETS;
- Extensions to existing installations that result in increased capacity of an EU ETS activity or the carrying out of an additional EU ETS activity;
- Installations that recommence operations following temporary closure;
- Changes in offshore installations reflecting new tiebacks and installation modifications to enhance the recovery of offshore oil and gas reserves; and
- Increases in Good Quality CHP capacity.

4.6 The Government has considered the following options for Phase II:

Option 1	Maintain all Phase I criteria
Option 2	Expand Phase I criteria to so that extensions to all activities in Annex I of the ETS Directive are eligible
Option 3	Reduce Phase I criteria to ensure that only extensions with direct emissions are eligible

DECISION 5 TREATMENT OF CLOSURE AND RATIONALISATION

4.7 One aspect of the new entrant regime is how to deal with installations that cease operations. For Phase I, the Government decided that installations which close permanently within the phase should keep the issued allowances for the year in which closure occurs but not receive any allocation in future years. The allowances that were no longer issued were added to the NER and so made available for new entrants.

4.8 The Government also decided that the closure rules should recognise site rationalisation in industrial sectors. In Phase I, therefore, where there is site rationalisation, the closed site will retain a proportion of its allocation. This rationalisation regime did not apply to the LEP sector.

4.9 The Government has considered the following options for Phase II:

Option 1	Maintain Phase I closure and rationalisation regime
Option 2	Maintain Phase I closure regime but remove rationalisation regime
Option 3	Apply closure regime only to the LEP sector and remove closure and rationalisation rules for other sectors
Option 4	Remove closure and rationalisation regimes for all sectors

DECISION 6 TREATMENT OF SURPLUS ALLOWANCES

4.10 The Phase I NAP provides that surplus allowances remaining in the NER will be dealt with by auction or sale, should there be sufficient surplus to justify a release to the market. Allowances that are no longer issued to closed installations are added to the Phase I NER and so made available for new entrants (see paragraph 4.7 above). The Commission's guidance on Phase II recommends that "allowances not allocated to closed installations be cancelled or auctioned".

4.11 The Government has considered the following options for Phase II:

Option 1	Auction or sell surplus allowances remaining in the NER
Option 2	Cancel surplus allowances remaining in the NER

5. BENEFITS, COSTS AND RISKS

5.1 DECISION 1 WHETHER TO HAVE A NEW ENTRANT RESERVE

Option 1 Have a new entrant reserve

Benefits

5.1.1 The UK Government's long term position is to move away from free allocation. However, it is recognised that if all other Member States allocate at a rate of 100% or close to, having an NER for Phase II may help to ensure continued investment in the UK by supporting the other aspects of the UK that make it a desirable location for global investment. Again, assuming that other Member States were to adopt policies of full allocation to new entrants, a new entrant reserve in the UK would also not discriminate against investment in cleaner technology and may help to improve energy security of supply. Research by consultants [5] estimated that the impact of 100% free allocation to new entrants would be to decrease emissions by around 13 $MtCO_2$ per year in 2012 – and to result in around 3GW more new gas generation capacity constructed over the whole of Phase II - relative to the position with no free allocations. Research by UBS[6] suggests that a lower new entry cost should lead to more investment in new CCGT plants, thus keeping electricity prices lower. However there are other ways to achieve this, such as allowing closing plants to retain their allowances for the remainder of the period.

Costs

5.1.3 This option would reduce the allocation to incumbents (as the NER is deducted from the allocation to each EU ETS sector), but would not increase the burden on incumbent UK firms. This is because allocations to sectors are based on emissions projections which take into account projected new entry (see paragraph 2.2.5). Deductions for the NER do not therefore equate to reducing incumbents' allocations below business as usual (assuming the contribution to the NER is accurate).

5.1.4 This option would not require businesses to take full account of the cost of carbon when making investment decisions (although the extent to which this cost was taken into account would depend on the rate of allocation) and would increase the complexity of the overall scheme.

5.1. 5 It has been noted that having an NER encourages new investment (5.1.1). However, the existence some element of free allocation means that new entrant investment decisions may take the cost of carbon into account to a lesser extent

[5] IPA Consulting report on "Implications of the EU ETS for the UK Power Generation sector" (November 2005). http://www.dti.gov.uk/files/file33199.pdf

[6] UBS Investment Research 7 June 2005.

than receiving no allocation – this could encourage investment in technology which is not the most carbon efficient, perhaps in the hope of short term gain.

5.1.4. Having an NER, as opposed to not having a NER, implies a greater administrative cost on Government, regulators and operators. For operators, the fee for an application to the NER in Phase I was £1,030, and some applications need to be independently verified at an additional cost. These administrative costs need to be weighed against the value of the allowances to the operator.

Risks

5.1.4 Overall, significant uncertainty surrounds the projections of costs and benefits as there are a number of interdependent factors that will determine relative burdens and benefits (such as the rate of allocation to new entrants and who contributes to the NER).

5.1.5 The extent to which the benefits will be realised depends on the accuracy of the estimation of the size of the NER. This must be estimated at least 18 months before the start of Phase II (which lasts for 5 years). Some industries do not make their investment plans so far in advance and therefore may not be able to provide robust estimates of new entrants expected during the period. If the NER is not sufficiently large then the benefits will be reduced; if it is too large then the costs to incumbents increase relative to the benefits to new entrants.

Option 2 Do not have a new entrant reserve

5.1.6 In this option, new entrants would be required to buy all of the allowances that they need on the market or through a Government auction or sale.

Benefits

5.1.7 This option would move towards the Government's long term goal of not having free allowances and would require companies to take the cost of carbon into account in making investment decisions.

5.1.8 If it is assumed that other Member States do have an NER, this option would ensure that only the most efficient firms or plants set up in the UK, as these would be the ones that would have the ability to remain commercially viable and meet the environmental goals at the least economic cost. This may have positive spilllover effects on incumbents so that firms in these markets allocate resources more efficiently. However, these benefits may not be available to those sectors where abatement opportunities are minimal and those that cannot pass through the costs of the scheme. Incumbents would not face a reduction in their allocation to pay for the NER.

5.1.9 This option would reduce the administrative burden on Government, regulators and operators. For operators, the fee for an application to the NER in Phase I was £1,030, and some applications need to be independently verified at an additional cost. (However, as installations need to have a greenhouse gas permit which covers their activities which fall within the scope of the EU ETS, new entrants would still be required to apply for a new/updated permit and to monitor and report their emissions. Further details of these costs can be found in the Enforcement, Sanctions and Monitoring section of the overall Phase II RIA.)

Costs

5.1.10 This option would require new entrants to buy allowances for their emissions from the start of their operations until the end of Phase II. It has been estimated that Phase II new entrants would require in the region of 80 million allowances over the phase as a whole. At an estimated price of €5 - €40 per allowance, this would increase the costs of new investment in the UK by an estimated €0.4 - €3.2 billion. Firms which are in the position of having to absorb these cost increases (as they cannot pass through the costs) typically produce products for which there are ready substitutes, rendering the demand curve price elastic.

5.1.11 Assuming that the size distribution of new entrant allocations will be similar in Phase II to that in Phase I (see Table 1 at paragraph 2.2.5 above), the costs for individual new entrants would break down as follows:

Table 2: estimated size distribution for Phase II new entrants

Percentage of new entrants	Number of allowances that would need to be purchased[7]	Maximum cost (€ million)
53%	1 – 62,000	€0.3 - €2.58 million
21%	62,000 – 125,000	€0.6 - €5 million
9%	125,000 – 312,000	€1.6 - €12.5 million
8%	312,000 – 625,000	€3.1 - €25 million
3%	625,000 – 1.25 million	€6.3 - €50 million
5%	1.25 million – 6.25 million	€31 - €250 million
1%	More than 6.25 million	€31 million upwards

5.1.12 Research by IPA Consulting indicated that no free allocation to new entrants would result in over 500MW less coal closures compared with the position where there was 100% free allocations to new entrants. This could lead to a potential reduction in the decrease of carbon emissions, although it is not possible to quantify this. This option would also treat new entrants inequitably as against incumbents who would receive at least a proportion of free allowances.

Risks

5.1.13 Overall significant uncertainty surrounds the projections of costs and benefits as there are a number of interdependent factors that will determine burdens and benefits.

5.1.14 This option could have competitiveness implications. If other Member States chose to have an NER, then there would be a risk that investors would choose to invest either in another Member State or outside the EU in preference to the UK. This would need to be considered in the context of non-EU ETS factors that influence the choice of the UK for inward investment.

[7] The ranges of allocations shown in the first column of Table 1, multiplied by 1.25 to take account of the increased length of Phase II (as the average period of time for which Phase I new entrants require allowances is 2 years; for Phase II it is 2.5 years).

5.1.15 Depending on the cost of carbon and on whether other Member States have an NER, it could also have implications for security of energy supply. Without an NER investors may choose to delay investment in new generation capacity which would mean there would not be sufficient capacity in the system to meet peak demand. Research by IPA Consulting considered three different scenarios, including the impact of different new entrant allocations. The scenario which included no free allocation to new entrants showed that new Combined Cycle Gas Turbine (CCGT) entry could be delayed by three years when compared to the other scenarios, with the new entrant allocation being one of the factors contributing to this result.

5.2 DECISION 2 RATE OF ALLOCATION TO NEW ENTRANTS

Option 1 100%

5.2.1 Under this option eligible new entrants would receive an allocation based on the average use of best practice technologies (LEP new entrants would also be subject to the same cut in allocation as LEP incumbents).

Benefits

5.2.2 This option would maintain the attractiveness of the UK within the EU as a place for business. It would not increase barriers to new entry as new entrants would be allocated at a comparable rate to that of incumbents. As allocations are made on the basis of best practice benchmarks, it would reward firms that utilised cleaner technology and who had taken into the cost of carbon in their investment decisions.

5.2.3 This approach could be consistent with the Commission's guidance on Phase II which recommends that allocation to new entrants should not be at projected "need" (which is undefined), as it would be calculated by reference to the most efficient new entrant via a best practice benchmark using standardised factors rather than the projected need of an individual installation.

Costs

5.2.4 It would not lead to an additional incentive to increase in CHP capacity and therefore would not help meet the UK's target for 10GW Good Quality CHP in 2010. It would incentiveise companies to take less account of the cost of carbon than would be the case where lower rates of allocation were applied. Nor would it show any movement towards the Government's long term goal of moving away from free allocation.

Risks

5.2.5 If other Member States allocated allowances to new entrants at greater than need then the UK could become less attractive as a place for investment.

However, this is unlikely as the Commission has issued guidance recommending that new entrants should be allocated at below projected need.

Option 2a 95% for all new entrants

5.2.6 Under this option, all new entrants would be allocated at 95% (LEP new entrants would also be subject to the same cut in allocation as LEP incumbents).

Benefits

5.2.7 This option would require companies to take some of the cost of carbon into account in investment decisions and would show movement towards the long term goal of moving away from free allocation. It would be consistent with the Commission's guidance on Phase II.

5.2. 8 This option would generate revenue for the Government. It is estimated that this could be between €32 million - €80 million in Phase II.

Costs

5.2.9 All new entrants would potentially have to buy 5% of their allowances for Phase II. It is estimated that this could cost industry between €32 million - €80 million in Phase II. This may increase barriers to new entry if this increased their costs disproportionately and so place them at a disadvantage to their competitors (UK, EU or non-EU), especially where incumbents may not have faced any similar increase in their costs. In the competition for investment across the UK, this could deter investment in the UK and potentially impact UK competitiveness. The impact would depend on the ability of firms to pass on these cost increases. Those firms that produce a differentiated product (for which consumers do not perceive there are close substitutes and for which the price elasticity of demand is relatively inelastic) are typically able to pass on costs to consumers. By contrast, firms that typically produce products for which there are ready substitutes (rendering the demand curve elastic) are in the position of having to absorb increases in costs.

5.2.10 Based on the estimated size distribution for Phase II new entrants (see Table 2 above), the maximum cost of a 95% rate for around half of Phase II new entrants would be in the region of €15,500 - €124,000. For around 20% of new entrants the maximum cost would be in the region €31,000 - €250,000. For the largest 6% of new entrants the cost would be upward of €0.6 million. As an example of the effect of this, the cost of purchasing 5% of allowances is estimated as being between 0.25 – 1.25% of the total cost of a new investment in hydro crackers in the refineries sector.

Risks

5.2.11 If other member states allocated allowances to their new entrants at a higher rate, this would make the UK a less attractive place for investment, although this would have to be viewed in the context of the non-EU ETS factors that make the UK an attractive location for inward investment. A lower rate for

NER allocation may make non-EU sites more attractive for investment if non-EU ETS factors did not offset the burdens from the EU ETS.

Option 2b	95% for all new entrants, with the following exceptions - 100% for CHP new entrants; LEP new entrants subject to same cut as LEP incumbents; new entrants that are boilers allocated at 90%

5.2.12 Under this option, new entrants would be allocated at 95% apart from CHP new entrants (which would be allocated at 100%); LEP new entrants (which would be subject to the same cut in allocation as LEP incumbents, or a 10% cut in allocation, whichever is the greater cut); and new entrant boilers (which would be allocated at 90%).

Benefits

5.2.13 This option would incentivise investment in CHP capacity in a targeted way by providing at least a 10% differential between the rate of allocation to CHP and its competitors (boilers and LEP). It has been estimated that this option could lead to a 0.9GW increase in CHP capacity by 2010, with an associated carbon saving of 0.26MtC at a benefit of €27.3 million. It would require companies to take some of the cost of carbon into account in investment decisions and would show movement towards the long term goal of moving away from free allocation. It would be consistent with the Commission's guidance on Phase II.

Costs

5.2.14 Non-CHP new entrants would potentially have to buy 5% of their allowances for Phase II, and new entrant boilers would potentially have to buy 10% of allowances. It is estimated that this could cost industry around €7.5 - €60 million in Phase II. This may increase barriers to new entry if this increased their costs disproportionately and so placed them at a disadvantage to their competitors (UK, EU or non-EU), especially where incumbents may not have faced any similar increase in their costs. The impact would depend on the ability of firms to pass on these cost increases.

5.2.15 The impact on new entrants of a 95% rate are set out in paragraph 5.2.9 above. It is estimated that the majority of boilers would require less than 62,000 allowances so the maximum cost to them of a 90% rate would be in the region of €31,000 - €248,000, although operators would have the option of installing CHP (and receiving a 100% rate of allocation).

Risks

5.2.16 It is considered that the risks for competitiveness would be the same as for Option 2a, as sectors facing industrial competition would be subject to the same cut in allocation as in Option 2a. Although investment in boilers would be subject to a cut of 10%, business would have the option of installing CHP (which would be allocated at 100%). A number of respondents to the consultation on the draft Phase II NAP argued that a differential of 10% would not be enough to incentivise CHP when combined with the effect of the benchmark that would be applied to new entrants.

Option 3 90% for non-CHP new entrants

5.2.17 Under this option, new entrants that are not CHP would be allocated at 90%. CHP new entrants would be allocated at 100%. LEP new entrants would be subject to the same cut in allocation as LEP incumbents, or a 10% cut in allocation, whichever is the greater cut.

Benefits

5.2.18 This option would incentivise investment in CHP capacity and would provide the same benefits as Option 2a (set out in paragraph 5.2.13 above).

Costs

5.2.19 New entrants subject to the cut would have to buy 10% of their required allowances for Phase II. It is estimated that this could cost industry around €32 - €256 million in Phase II. This would increase barriers to new entry as incumbent installations would not be subject to the same cut in allocation.

5.2.20 Based on the estimated size distribution for Phase II new entrants, the maximum cost of a 90% rate for around half of Phase II new entrants would be in the region of €31,000 - €248,000. For around 20% of new entrants the maximum cost would be in the region €62,000 - €500,000. For the largest 6% of new entrants the cost would be upward of €0.64 million. As an example of the effect of this, the cost of purchasing 10% of allowances is estimated as being between 0.5 – 1.5% of the total cost of a new investment in hydro crackers in the refineries sector.

Risks

5.2.21 The competitiveness risks would be greater than for options 2a and 2b as the differential between rates of allocation in the UK and other Member States could potentially be greater.

Option 4 70% for non-CHP new entrants

5.2.22 Under this option, new entrants that are not CHP would be allocated at 70%. CHP new entrants would be allocated at 100%. LEP new entrants would be subject to the same cut in allocation as LEP incumbents, or a 30% cut in allocation, whichever is the greater cut.

Benefits

5.2.23 It has been estimated that this option could lead to a 1.6GW increase in CHP capacity by 2010, with an associated carbon saving of 0.48MtC at a benefit of €48.9 million. It would require companies to take more of the cost of carbon into account in investment decisions and would show movement towards the long term goal of moving away from free allocation.

Costs

5.2.24 New entrants subject to the cut would have to buy 30% of their allowances for Phase II. It is estimated that this could cost industry around €96 - €770 million in Phase II. This may increase barriers to new entry if this increased their costs disproportionately and so placed them at a disadvantage to their competitors (UK, EU or non-EU), especially where incumbents may not have faced any similar increase in their costs. The impact would depend on the ability of firms to pass on these cost increases, but there ability to pass on costs would be reduced due to the increased size of the cut.

5.2.25 Based on the estimated size distribution for Phase II new entrants, the maximum cost of a 70% rate for around half of Phase II new entrants would be in the region of €93,000 - €745,000. For around 20% of new entrants the maximum cost would be in the region of €187,000 - €1.5 million. For the largest 6% of new entrants the cost would be upward of €1.9 million. As an example of the effect of this, the cost of purchasing 30% of allowances is estimated as being between 1 – 2% of the total cost of a new investment in hydro crackers in the refineries sector.

Risks

5.2.26 The risks for competitiveness would be greater than for any of the other options as it would provide the largest potential differential between rates of allocation in the UK and other Member States.

5.3 DECISION 3 SUBTRACTING THE NEW ENTRANT RESERVE

Option 1 A flat rate NER deduction across all sectors

5.3.1 Under this option, the NER requirements for each sector are summed together to estimate the total NER required. A uniform percentage is then subtracted from each sector's allocation to create the NER.

Benefits

5.3.2 This is a simple and clear approach as the same percentage is taken off each sector. There would therefore be minimal additional cost to Government.

Costs

5.3.3 This option would place a higher relative burden on incumbents in those sectors that are declining or have zero/low growth rate. It would be inequitable as it would treat dissimilar situations (i.e. sectors with very different growth rates and, therefore, prospective Phase II new entry) in a similar way. Imposing a flat rate could mean that sectors with little or no growth (and therefore likely to have few or no new entrants) would be subsidising sectors with high growth (and a higher proportion of new entrants).

Risks

5.3.4 Increasing the deduction from declining or low growth sectors would result in lower allocations to incumbent installations in those sectors. There is a risk that these lower allocations (which would equate to increased costs for the installations) may worsen the decline of these sectors.

Option 2 Take sector specific contribution from all sectors

5.3.5 Under this option, the sector estimated prospective new entry for Phase II would be the amount collected from the sector as their contribution to the NER.

Benefits

5.3.6 This option relates sector reductions to their estimated need, so higher NER reductions should correlate with higher sector caps as these take growth into account. It would not place a disproportionate burden on incumbents in those sectors that were declining or had zero/low growth rate (and therefore unlikely to have new entry), as they would not be required to subsidise new entry in higher growth sectors.

Costs

5.3.7 Some sectors tend to plan investment further in advance than others; these sectors will have higher known NER requirements (and therefore a higher NER reduction) and thus may be disadvantaged.

Risks

5.3.8 This option increases the incentive for sectors to underestimate their known NER requirements in order to receive a lower sector-specific NER reduction. Data would therefore need to be verified and checked, which would increase the regulatory burden on operators.

Option 3 Combination of a sector specific contribution for sectors with high levels of new entry (both historic and expected) and two flat rates for i) sectors with high levels of historic new entry and low levels of expected Phase II new entry and ii) sectors with low levels of new entry (both historic and expected)

5.3.9 Under this option, there are three distinct groups of sectors. One group of sectors will contribute their expected new entry requirements to the NER. The other two groups will contribute a (different) flat rate percentage.

5.3.10 Which category a sector fell into would depend on whether the sector had a large proportion of new entry (relative to both the sector's estimated Phase II "Business as Usual" emissions and the size of the NER as a whole). This assessment shows three types of sector that are significantly different:

- Sectors where new entrants account for more than 4% of the Phase II BAU emissions, based on both historic trend analysis and sector expert opinion of expected Phase II new entry (the Large Electricity Producers, Offshore oil and gas, Downstream Oil and Gas and Combined Heat and Power sectors). These sectors would contribute a sector specific amount to the NER; it has been estimated that they will account for around 93% of allocations to new entrants in Phase II; and

- Sectors where historic new entrants accounted for more than 4% of the Phase II BAU emissions and expected new entrants account for less than 4% of the Phase II BAU emissions. These sectors would pay a flat rate, which is currently estimated at 2% of their sector cap.

- Sectors where both historic new entrants and expected Phase II new entrants account for less than 4% of the Phase II BAU emissions. These sectors would pay a flat rate, which is currently estimated to be 1% of their sector cap.

Benefits

5.3.11 Under this option, those sectors that will account for the vast majority of the Phase II NER (around 93%) will contribute according to their known need. This is equitable as it reduces the possibility of cross subsidisation between sectors. Estimates of Phase II new entry are likely to be more accurate as these sectors tend to plan investment further in advance.

5.3.12 However, it would not be appropriate to take the same approach for sectors that account for a small proportion of the NER. In these cases, the advantage of an individualised approach would be outweighed by concerns about the quality of estimated new entry. Estimates of new entry for these sectors will be based on actual trends of new entry in Phase I.

5.3.13 The consultation on the draft Phase II NAP asked respondents for views on the proposed methodology for contributing to the NER. Of the respondents who answered the question, 62% broadly agreed with an approach of combining a sector-specific contribution with a flat rate contribution. A number of respondents emphasised the importance of ensuring that the size of the NER was accurate.

Costs

5.3.14 Sectors that are contributing a sector-specific amount will have to contribute more allowances than sectors contributing on a flat rate basis. However, the former will not be cross-subsidising the latter as their contributions reflect their known new entry. Their contributions will be deducted from their sector caps which also reflects projected new entry.

Risks

5.3.15 The risks would be the same as those set out in paragraph 5.3.8, although the level of risk would be lower than for option 2 as the sector specific contribution will come from less sectors.

5.4 DECISION 4 ELIGIBILITY FOR THE NEW ENTRANT RESERVE

Option 1 Maintain all Phase I criteria

Benefits

5.4.1 This option would provide consistency of approach, so giving continuity and certainty to operators.

Costs

5.4.2 Some applications for allowances from the NER under the eligibility criteria require verification by independent verifiers (as they contain an element of subjectivity).

Risks

5.4.5 This approach could be inconsistent with the Directive on the grounds that it treats installations in certain sectors move favourably than others.

Option 2 Expand Phase I criteria to cover all activities in Annex I of the ETS Directive

5.4.6 In Phase I, extensions in the iron & steel and refineries sectors were eligible for allowances from the NER even where a piece of equipment did not directly produce emissions itself, but produced an increase in emissions for the installation as a whole (an "integrated approach"). Under this option, the integrated approach would be adopted for all activities in Annex I of the Directive.

Benefits

5.4.7 This option would encourage investment in UK on extensions to activities within the scope of the EU ETS. It would provide equitable treatment between new entrants and incumbents as emissions from equivalent activities by incumbents are taken into account in allocating the incumbent's individual allowances.

5.4.8 However, new entrants in the majority of Annex I sectors would not substantially benefit from a move to an integrated approach – either because the most significant capital expenditure is the piece of equipment giving rise to the emissions (and thus falling within a direct approach), or because the Annex I activity relates to the combustion activity only (which would already fall within a direct approach).

Costs

5.4.9 This option would increase the size of the NER, thus reducing the number of allowances available to incumbent installations. It could increase the complexity and costs of the scheme for new entrants as applications under the integrated approach would require more independent verification. It would also be more burdensome for the regulators and would require substantial reworking of the allocation methodology spreadsheet.

Risks

5.4.10 This option may not be consistent with the Commission's guidance that increased use of existing capacity is not eligible for allowances from the NER.

Option 3 Reduce Phase I criteria to cover extensions with direct emissions only

5.4.11 In Phase I, extensions in all sectors except iron & steel and refineries sectors were only eligible where they involved a piece of equipment which directly produced emissions that had to be accounted for under the ETS (a "direct emissions approach"). Under this option, the direct emissions approach would be adopted for all sectors.

Benefits

5.4.12 This option would reduce the size of NER so making more allowances available to incumbents. It would remove the current difference in treatment between different sectors. It would reduce the complexity of the NER eligibility rules.

Costs

5.4.13 This option would require changes to the allocation methodology for the iron & steel and refineries sectors. It would result in lower allocations for extensions in these sectors. However, it is not considered that refineries new entrants would experience a major decrease in allocations as their emissions are likely to be largely direct. The impact on the iron and steel industry will be mitigated as one company accounts for both the vast majority of new entrant allocations and incumbent allocations. As the NER is funded from the sector cap (which takes account of projected new entry), a reduction in new entrant allocations would be compensated by a corresponding increase in incumbent allocations.

Risks

5.4.14 It could lead to loss of proposed investment where the addition results in increased emissions through greater use of existing capacity (although for the reasons set out in paragraph 5.4.13. it is considered that this risk is low).

5.4.15 The consultation on the draft Phase II NAP asked respondents about the application of a direct emissions approach for new entrants. 52% of respondents replied to this question; of these, responses were fairly evenly split, with 22 respondents favouring the direct emissions approach and 21 respondents preferring an integrated approach. The main argument against the direct approach was that it would lead to an under-allocation of allowances and so would deter new entry investment. A number of respondents made the point that Germany includes indirect emissions. Several respondents argued that the integrated approach should be extended to cover e.g. the chemicals and paper sectors.

5.5 DECISION 5 TREATMENT OF CLOSURE AND RATIONALISATION

Option 1 Maintain Phase I closure and rationalisation regime

5.5.1 Under this option, installations which close permanently within Phase II would keep the issued allowances for the year in which closure occurs but not receive any allocation in future years. Options for the treatment of allowances that are not issued to closed installations are considered in Decision 6 below. Where EU ETS activities are closed at one installation and moved to another installation, the rationalisation rule amends the closure rule to allow the operator to continue to receive allowances allocated to the closing installation (the rationalisation rule would not apply to the LEP sector). There are currently 5 installations that are expected to close in Phase II, accounting for around 2.6 million allowances.

Benefits

5.5.2 Maintaining the closure regime would mean that installations that no longer require allowances do not receive a free allocation, which is consistent with the principle of allocation in line with need. The closure rules prevent operators from receiving a double allocation by retaining an allocation for a closed plant and applying for an allocation from the NER for a new installation. This option maintains the UK's competitive position as it does not encourage operators to close plants in the UK in preference to those in other Member States who have adopted similar rules.

5.5.3 Maintaining the rationalisation provides operators with the opportunity to close down an inefficient plant and make use of the spare capacity at existing installations. In some circumstances, investment in the receiving plant would be ineligible for new entry allowances but investment is necessary in order to allow for a transfer of production. It encourages investment on rationalisation within the UK and may make some rationalisation decisions viable. The consultation on the draft Phase II NAP in March 2006 asked respondents whether the rationalisation regime should stay in place. Over 95% of those who responded agreed that the rule should remain, although some respondents had suggestions for changes to the rule.

Costs

5.5.4 The closing installation would not receive the allowances allocated to it in the final allocation decision. The cost will vary from installation to installation depending on the number of allowances not issued, and the allowance price at the time the closure decision is made. This creates a barrier to the closure of older, carbon-inefficient installations.

5.5.5 In addition, the closure and rationalisation regimes are complex and difficult for regulators to implement. Rationalisation requires verification of the quantity and nature of the transfer, at additional cost to the operator.

Risks

5.5.6 This option creates incentives for operators to change their mode of operation to benefit from the rules.

Option 2 Maintain Phase I closure regime but remove rationalisation regime

5.5.7 Under this option, installations which close permanently within Phase II would keep the issued allowances for the year in which closure occurs but not receive any allocation in future years. Options for the treatment of allowances that were no longer issued is discussed in Decision 6 below. There would be no special rule for rationalisation.

Benefits

5.5.8 This option would have the same benefits set out in paragraph 5.5.2 above. In addition, it would improve the simplicity and transparency of the EU ETS, particularly as the rationalisation regime has been difficult to implement.

Costs

5.5.9 This option would have the same costs set out in paragraph 5.5.5. In addition, it would not encourage investment on rationalisation within the UK. It would remove the opportunity operators have to close down an inefficient plant and make use of the spare capacity at existing installations.

Risks

5.5.10 The rationalisation rule was originally introduced for industrial sectors in Phase I to correct the disincentives for rationalisation created by the closure rule for . This option would re-introduce those disincentives.

Option 3 Apply closure regime only to the LEP sector and remove closure and rationalisation rules for other sectors

5.5.11 Under this option, installations in the LEP sector which close permanently within Phase II would keep the issued allowances for the year in which closure occurs but not receive any allocation in future years. Options for the treatment of allowances that were no longer issued is discussed in Decision 6 below. Installations in other sectors which close permanently would retain all their issued allowances for the rest of the phase.

Benefits

5.5.12 This option would make the EU ETS administratively simpler as it would remove the closure regime for all sectors apart from the LEP sector and would remove the rationalisation regime entirely. It would therefore reduce the administrative burden on regulators. (However, if the subsequent phase allocated free allowances to incumbents there would still need to be some form of closures mechanism to ensure that operators whose installations have closed did not receive any allowances in the next phase.) It would encourage operators to close older plant which is likely to be the least efficient.

Costs

5.5.13 This option would have costs to the UK's competitive position as it would encourage operators to close non-LEP plants in the UK in preference to those in other Member States (assuming that other Member States maintain their closure rule).

Risks

5.5.14 There is a risk that operators could receive a double allocation by retaining an allocation for a closed plant and applying for an allocation from the NER for a new installation. It could incentivise operators outside the generation sector to make marginal closure decisions on the basis of obtaining allowances.

Option 4 Remove closure and rationalisation regimes for all sectors

5.5.15 Under this option, all installations which close permanently within Phase II would continue to be issued allowances for the rest of the phase.

Benefits

5.5.16 This option would make the EU ETS more administratively simpler than Option 3 as it would remove the closure and rationalisation regimes entirely. It would therefore reduce the administrative burden on regulators. (However, if the subsequent phase allocated free allowances to incumbents there would still need to be some form of closures mechanism to ensure that operators whose installations have closed did not receive any allowances in the next phase.) It would encourage operators to close older plant which is likely to be the least efficient.

Costs

5.5.17 This option would have costs to the UK's competitive position as it would encourage operators to close plants in the UK in preference to those in other Member States (assuming that other Member States maintain their closure rule). It would also remove the current incentive to retain capacity within the generation sector and may therefore have an adverse impact on security of supply objectives. Fossil fuelled generating plant approaching closure is most likely to be operated at times of high power demand and so are important for maintaining supply in these periods.

Risks

5.5.18 This option would have the same risks as option 3, but these would be greater as these risks would also apply to the generation sector as well as industrial sectors.

5.6 DECISION 6 TREATMENT OF SURPLUS ALLOWANCES

Option 1 Auction or sell surplus allowances

Benefits

5.6.1 This option provides flexibility to incumbents and new entrants to meet their emissions targets. It is consistent with the economic principles of a market based carbon price and would ensure that liquidity is in line with the overall UK cap. Auctioning or sale of 10% of NER allowances could result in revenue to Government of €185 million. The consultation on the draft Phase II NAP asked respondents whether surplus allowances should be cancelled or auctioned. Over 80% of respondents who answered this question thought that allowances should be made available to the market.

Costs

5.6.2 This option does not tighten the level of ambition and therefore is not as beneficial to the environment as cancellation. The environmental benefit would be proportionate to the number of surplus allowances.

5.6.3 There would be a direct cost to Government of running the auction or sale. A report commissioned by DTI and Defra[8] estimated that it would cost between £150,000 and £250,000 to carry out an auction. A commission-based sale could be conducted to minimize costs if the number of allowances is below that which would make an auction profitable.

Risks

5.6.4 There is uncertainty over the number of surplus allowances that would be available towards the end of the Phase, as it is not known how many allowances will not be issued as a result of applying the closure rule. It is currently estimated that approximately 15% of the Phase I NER remains unallocated. If the number of allowances remaining in the NER is small the costs of running a sale may outweigh the revenue generated.

5.6.5 The Directive provides that Member States are not able to auction more than 10% of their overall cap in Phase II. The UK is currently considering what, if any, percentage of allowances it should auction (see the separate RIA on auctioning) and if the level of surplus allowances takes the UK over this 10% threshold, these additional surplus allowances will have to be cancelled.

5.6.6 Larger firms may find it easier to participate in an auction/sale than others, particularly smaller firms.

Option 2 Cancel surplus allowances

Benefits

[8] "EU ETS: Planning for Auction or Sale" at: http://www.defra.gov.uk/corporate/consult/euets-salemethods/index.htm - ermreport

5.6.7 Cancelling any remaining allowances would increase the level of ambition from that published in the UK NAP and as such is seen as the most environmentally beneficial option. The environmental benefits are proportionate to the number of surplus allowances. It would be simple to operate and would provide some savings for Government as there would be no cost of carrying out an auction although this could be off-set by revenue from an auction (see paragraph 5.6.3).

5.6.8 Reduction in flexibility to meet emissions targets might help encourage investment in clean technology, but as the number and price of any allowances for sale will be unknown until close the end of Phase II, it is unlikely to effect investment decisions.

Costs

5.6.9 This option would remove allowances in the NAP from the market, thereby reducing liquidity in the market. Would increase the costs of compliance for operators.

5.6.10 This option would reduce flexibility for installations to buy allowances to meet emissions targets. This is of particular concern for sectors that have tighter allocations, for example the LEPI sector.

Risks

5.6.11 Proportionate to the number of allowances that remain, the monetary value of the allowances has been lost to the UK economy. There may not be sufficient allowances for installations to buy on the UK market, so the competitiveness of UK installations may be impacted negatively.

6. SMALL FIRMS' IMPACT TEST

6.1 The scope of the EU ETS is defined in Annex I of the EU ETS Directive as "activities of a combustion installation with a thermal input capacity of more than 20MW". Decisions on the NER do not affect which companies fall within the scope of the EU ETS; rather, the NER provides a mechanism through which allowances can be acquired free of charge for compliance purposes. The overarching RIA accompanying this document details the general enforcement, monitoring and verification costs that are applicable to all EU ETS installations.

6.2 The main decisions which could have a particular impact on small firms are whether or not to have an NER; the rate of allocation; and how the NER is subtracted. If there was not an NER, this could adversely impact the ability of small firms to enter a sector or to expand. However, the costs to them are likely to be smaller as they are likely to be less energy intensive and therefore have a lower proportion of emissions per output. The same arguments apply where the rate of allocation to new entrants is less than 100%. Subtraction of the NER is the decision that is likely to have the most impact on small firms in the scheme, as it

could place a higher relative burden on incumbents (including small firms) in those sectors which were declining or had zero/low growth rate.

7. COMPETITION ASSESSMENT

7.1 The EU ETS covers electricity generation and the main energy intensive industries - power stations, refineries and offshore, iron and steel, cement and lime, paper, food and drink, glass, ceramics, and engineering and vehicles (which, overall, account for around 50% of UK's CO_2 emissions). As noted in paragraph 6.1, decisions on the NER do not affect which companies fall within the scope of the scheme.

7.2 It is difficult to assess the competition impacts of individual decisions on NER issues as there is a degree of interdependency with other NER decisions as well as other decisions related to the EU ETS (for example the size of the overall cap and sector caps). However, it is not considered that any decisions on NER issues would be likely to affect the market structure for the sectors within the EU ETS (for example by changing the number or size of firms). Firms which are in the position of having to absorb cost increases (as they cannot pass through the costs) typically produce products for which there are ready substitutes.

7.3 Decisions on whether or not to have an NER could have competition implications. If there was no NER, new installations would have to buy all the allowances associated with their carbon emissions for the period of the phase in question. This would lead to higher set-up costs for new/potential firms compared with the costs for existing firms (and would also lead to higher ongoing costs for the remaining period of the phase – which could be up to five years). If these additional costs could not be passed on, firms may face a competitive disadvantage, especially if other Member States take a different approach to the UK. On 24 November 2005, the Government announced that free allowances will be available for new entrants in Phase II.

7.4 If the rate of allocation to new entrants is substantially lower than the rate of allocation to incumbents or to new entrants in other Member States, this would increase barriers to new entry and expansion as new entrants would have to pay for some of their required emissions. The effect of this would depend on the rate of allocation and the price of allowances, and whether these additional costs could be passed on to customers. However, the differential treatment would only occur for a limited period of time (in Phase II, for a maximum of 5 years) as new entrants in a particular phase would become incumbents in the subsequent phase.

7.5 The impact on potential new entrants will not be spread uniformly across all firms and all sectors, but will vary according to the firms' individual cost functions and particularly the market characteristics of the sector in which it operates. The adjustments that firms would be forced to make in response to higher electricity prices would be greater the more energy intensive the sector, and depend too on the nature of competition faced by the firm. The more the firm is able to pass on the costs associated with higher energy costs and of EU ETS to consumers of its output, including other businesses, the smaller the adjustments it will itself be forced to make in response to higher energy prices. That the bulk of the influence

on non-LEP sectors is expected to be from the indirect effect of higher electricity prices is a reason to suppose that the impact of under allocating the NER reserve by 5 per cent is likely to be small.

7.6 Decisions on how the NER was subtracted from incumbents could potentially affect some firms more than others. If the contribution was subtracted as a flat rate, this could place a higher relative burden on incumbents in those sectors that were declining or had zero/low growth rate. If the contribution to the NER was on a sector specific basis, firms in sectors with higher projected rates of new entry would have to pay proportionally more than those with lower projected rates of new entry, even though particular firms may not be expecting to apply for allowances from the NER. However, these decisions would not lead to higher set-up/ongoing costs for new firms compared with the costs for incumbents.

7.7 Decisions on eligibility for the NER would have an effect on the size of the NER which would itself have a corresponding effect on the amount that incumbents have to pay towards the NER. If the Phase I eligibility criteria were extended, this would reduce the number of allowances available to incumbents, although it would also reduce the costs for new entrants where extensions result in an increase in emissions for the site as a whole but where the emissions do not come directly from the extension itself. If the Phase I eligibility criteria were reduced, this could lead to higher costs for extensions in the iron & steel and refineries sector compared with the costs for incumbents.

7.8 Decisions on the treatment of closure and rationalisation would not impose additional costs on firms, nor would they have an effect on the costs for new firms. By definition, permanent closure would mean that a firm does not have emissions and therefore is no longer subject to the provisions of the EU ETS. The different options for the closure regime are concerned with whether firms should be provided with incentives to close older plant, not with the imposition of additional costs.

8. ENFORCEMENT, SANCTIONS AND MONITORING

8.1 For information on the general enforcement, sanction and monitoring requirements of the EU ETS, please see the overarching Phase II full RIA.

9. IMPLEMENTATION AND DELIVERY PLAN

9.1 The EU ETS Directive requires that the UK's Phase II National Allocation Plan (NAP) is submitted to the European Commission by 30 June 2006.

9.2 A formal consultation on the draft NAP was launched in March 2006 and revised Partial RIAs (including this RIA) were published alongside that document. The draft NAP included policy decisions on the NER for Phase II

9.3 The Partial RIAs were also published with the NAP, when submitted to the European Commission in August 2006. The full RIA is being published with the final decision on installation-level allocations.

10. POST-IMPLEMENTATION REVIEW

10.1 Please see the overarching Phase II final RIA for details of post-implementation review and delivery plan.

11. SUMMARY AND RECOMMENDATIONS

11.1 The table below summarises the benefits and costs of each option. The Government's preferred option is italicised.

Option	Benefits	Costs
1.1 - have an NER for Phase II	• *Would potentially encourage new investment and cleaner technology.* • *Could improve energy security of supply in the UK by increasing investment in new CCGT plant.*	• *Would reduce allocation to incumbents.* • *Would not require new investment to take the costs of carbon into account.* • *Would maintain complexity of overall scheme.*
1.2 - do not have an NER for Phase II	• Would slightly reduce the administrative burden on companies. • Would move towards Government's long-term goal of not having free allowances. • Would require companies to take the costs of carbon into account in investment decisions.	• Companies would have to buy allowances at an estimated total cost of €800 million – €2 billion. • Could lead to delay in investment in new generation capacity with adverse implications for security of electricity supply. • Could increase barriers to new entry.
2.1 – 100% allocation to new entrants	• Would maintain attractiveness of UK as a place for investment. • Would not increase barriers to new entry so potentially encouraging incumbents to undertake practical abatement efforts.	• Would not provide incentives for use of CHP. • Would not require some average companies to take any of cost of carbon into account. • No movement to Government's long-term goal of not having free allowances.
2.2a – 95% allocation to all new entrants	• Would require companies to take some of the cost of carbon into account in investment decisions. • Some movement to	• Would not provide incentives for use of CHP. • Would cost industry between €32 million and €80 million in Phase II.

	Government's long-term goal of not having free allowances.	• Would increase barriers to new entry. • Could lead to loss of investment in the UK if other member states had a higher rate of allocation to new entrants.
2.2b – 95% allocation to non-LEP/CHP new entrants; 90% to boilers	• *Could lead to 0.9GW increase in CHP capacity with a carbon saving of 0.26MtC, at a value of €27.3 million.* • *Would require companies to take some of the cost of carbon into account in investment decisions.* • *Some movement to Government's long-term goal of not having free allowances.*	• *Would cost industry between €15 million and €37.5 million in Phase II.* • *Would increase barriers to new entry.* • *Could lead to loss of investment in the UK if other member states had a higher rate of allocation to new entrants.*
2.3 – 90% allocation to non-CHP new entrants	• Could lead to 0.9GW increase in CHP capacity with a carbon saving of 0.26MtC, at a value of €27.3 million. • Would require companies to take more of the cost of carbon into account in investment decisions. • More movement to Government's long-term goal of not having free allowances.	• Would cost industry between €64 million and €160 million in Phase II. • Would increase barriers to new entry. • Increased risk of loss of investment in the UK if other member states had a higher rate of allocation to new entrants.
2.4 – 70% allocation to non-CHP new entrants	• Could lead to 1.6GW increase in CHP capacity with a carbon saving of 0.48MtC, at a value of €48.9 million. • Would require companies to take more of the cost of carbon into account in investment decisions. • More movement to Government's long-term goal of not having free allowances.	• Would cost industry between €192 million and €480 million in Phase II. • Would increase barriers to new entry. • Increased risk of loss of investment in the UK if other member states had a higher rate of allocation to new entrants.
3.1 – flat rate NER contribution	• Simple and clear approach	• Places a higher relative burden on declining sectors with declining/ zero/low

across all sectors		growth. • Would lead to cross-subsidisation between sectors.
3.2 – sector specific contribution only	• Relates sector reductions to their known need so higher NER reductions should correlate with higher sector caps that take growth into account • Would not place a burden on declining sectors with declining/ zero/low growth	• Would disadvantage sectors that plan investment further in advance. • Does not take into account accuracy of plans for new entry in those sectors with short lead time for investment
3.3 – flat rate contribution for some sectors; sector specific contribution for other sectors	• *Relates sector reductions to their known need to a greater extent than option 3.1, so higher NER reductions should correlate more with higher sector caps that take new entry into account* • *Takes into account accuracy of plans for new entry in those sectors with short lead time for investment*	• *Would disadvantage sectors that plan investment further in advance.*
4.1 – retain all Phase I eligibility criteria	• Would provide consistency of approach, giving continuity and certainty to operators.	• Existing approach requires some independent verification of applications
4.2 – expand Phase I extensions criterion to cover all Annex I activities	• Would encourage investment in UK on extensions to some existing EU ETS activities. • Would provide equitable treatment between EU ETS incumbents and NER extensions	• Would increase the size of the NER, thus reducing number of allowances. • would increase complexity and costs of applications for NER allowances. • Would require reworking of NER allocation methodology spreadsheet. • Would not benefit majority of EU ETS sectors
4.3 – reduce Phase I criteria to cover extensions with direct emissions only	• *Would reduce the size of the NER, thus making more allowances available to incumbents* • *Would remove the difference in treatment between different sectors.* • *Would reduce the complexity of the NER*	• *Would require changes to NER allocation methodology for iron & steel and refineries sectors.* • *Would result in lower allocations for extensions in these sectors (although effects would not be substantial).*

	eligibility rules	• *Could discourage investment where these result in increased emissions through greater use of existing capacity.*
5.1 – maintain Phase I closure and rationalisation regime	• *Installations that no longer require allowances do not receive a free allocation* • *Would benefit those new entrants that would not have received allowances if the closure rule had not been in place.* • *Prevents operators from receiving a double allocation.*	• *Creates a barrier to the closure of older, carbon-inefficient installations.* • *Would maintain complexity of the scheme.* • *Some additional cost to operators for verification of any rationalisations.*
5.2 – maintain Phase I closure regime but remove rationalisation regime	• Same benefits as option 5.1. • Would also improve simplicity and transparency of the scheme.	• Same costs as option 5.1. • Could also discourage investment on rationalisation within the UK.
5.3 – apply closure regime only to generation sector and remove other closure and rationalisation rules	• Would improve simplicity and transparency of the scheme. • Would encourage operators to close older plant which is likely to be the least efficient.	• Would have adverse impact on UK's competitive position as would encourage closure of UK plants compared to plants in other member states.
5.4 – remove closure and rationalisation regimes	• Same benefits as option 5.3	• Would have adverse impact on UK's competitive position as would encourage closure of UK plants compared to plants in other member states.
6.1 – auction or sell surplus NER allowances	• *Would ensure that liquidity of market is in line with UK cap and provide flexibility to operators.* • *Would result in increased revenue to Government.*	• *Would not have as great an environmental benefit as option 6.2.* • *Would be a direct cost to Government of between £150,000 - £250,000 to carry out an auction.*
6.2 – cancel surplus NER allowances	• Would be more environmentally beneficial than option 6.1. • Would be simple to operate.	• Would reduce liquidity in the market. • Would reduce flexibility of installations to meet emission targets.

12. DECLARATION

12.1 I have read the Regulatory Impact Assessment and I am satisfied that the benefits justify the costs

Signed

Date

IAN PEARSON, MINISTER OF STATE
DEPARTMENT FOR ENVIRONMENT FOOD AND RURAL AFFAIRS