

# EU Emissions Trading Scheme

Approved Phase II National Allocation Plan  
2008-2012



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

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## INTRODUCTION

1. This document sets out the UK's National Allocation Plan (NAP) for participation in the European Union Emissions Trading Scheme (the "EU ETS" or the "Scheme") for the period 2008 to 2012 (Phase II)<sup>1</sup>.
2. The EU ETS is a Community-wide scheme established by Directive 2003/87/EC<sup>2</sup> ("the Directive") for trading allowances to cover the emissions of greenhouse gases from permitted installations set out in Annex I of the Directive. Phase I began on 1 January 2005 and Phase II runs from 1 January 2008 to 31 December 2012.
3. Each Member State must develop a NAP for the second phase stating:
  - the total quantity of allowances that the Member State intends to issue during that phase; and
  - how it proposes to distribute those allowances among the installations which are subject to the Scheme<sup>3</sup>.
4. These Plans must be based on objective and transparent criteria, including those listed in Annex III of the Directive. Annex III consists of both mandatory and optional criteria and is reproduced for convenience at Appendix A. The European Commission published guidance on Phase II NAPs in December 2005<sup>4</sup>. This aims to reduce many of the disparities resulting from the implementation of Phase I across the EU and, by requesting more detailed and consistent information, will allow a more transparent and robust assessment of Member States' NAPs and detail of how they will meet their Kyoto targets.
5. National Allocation Plans must be published and notified to the European Commission. The Commission will then consider each NAP and may reject any aspect of any Plan, giving reasons, on the basis that it is incompatible with the Directive. Member States may propose appropriate amendments.
6. Once accepted by the Commission, the NAP will form the basis for the final decision made by each Member State under Article 11 of the Directive on the total quantity of allowances to be issued and their distribution to installations subject to the Scheme. For Phase II (2008 to 2012), these final allocation decisions must be made by 31 December 2006.
7. This Plan has been developed by the Government with the close co-operation of the Devolved Administrations for Scotland, Wales and Northern Ireland.

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<sup>1</sup> For additional information about the EU ETS see the Defra website at:

<http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm>

<sup>2</sup> Directive of the Council and European Parliament establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Directive 1996/61/EC [http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_275/l\\_27520031025en00320046.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_275/l_27520031025en00320046.pdf)

<sup>3</sup> Article 9(1) of the Directive

<sup>4</sup> Available from: [http://europa.eu.int/comm/environment/climat/pdf/nap\\_2\\_guidance\\_en.pdf](http://europa.eu.int/comm/environment/climat/pdf/nap_2_guidance_en.pdf)

8. In developing this Plan, the UK has taken into account the two sets of guidance published by the Commission to assist Member States in the implementation of the criteria listed in Annex III of the Directive and for the development of Phase II NAPs<sup>5</sup>. These documents suggest a common format for NAPs, which has been followed in drafting this Plan. The common format takes the form of a series of questions addressing the mandatory and optional criteria in Annex III. The answers to these questions, which are set out below, describe how the UK considers the criteria have been met. This document includes Summary Tables at Appendix E, as set out in further guidance from the Commission.

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<sup>5</sup> COM (2003) 830 and COM (2005) 730 see:  
[http://ec.europa.eu/environment/climat/emission\\_plans.htm](http://ec.europa.eu/environment/climat/emission_plans.htm)

## SUMMARY

1.	The UK will allocate 246,175,998 allowances per annum in the second phase of the EU ETS (2008-2012), including those to be auctioned or sold. This equates to a cap of 1230,879,991 <sup>6</sup> allowances over the whole period. This figure includes 219,332,490 allowances per annum for activities that were covered by the Scheme in Phase I, 9,611,188 allowances to cover emissions from expansion of scope in Phase II and 17,232,320 to be auctioned or sold in Phase II. The total number of allowances allocated will be reduced to take account of installations that come out of the Scheme as a result of the implementation of a de minimis threshold and change to the definition of ceramics.	Section 1 & Section 8
2	The reduction in allowances against business as usual will be borne entirely by the Large Electricity Producers (LEP) <sup>7</sup> , as in Phase I.	Section 1
3	The Government has set an 8% limit on the use of project credits at an installation level. This equates to approximately two thirds of the difference between business as usual emissions and the total cap (i.e. the level of effort in the UK). As this limit will apply to large electricity producers before allowances are deducted for auctioning, the limit for each installation in the LEP sector will be 9.3% of their free allocation. Recognising the uncertainty as to final emissions in any one year, this limit will apply annually and operators may bank their permitted level of project credit use between years within the period.	Section 1
4	The Government intends to auction, or otherwise sell, 7% of allowances in Phase II. Allowances from closures and surplus allowances from the New Entrant Reserve will be auctioned or sold in addition to this.	Section 1
5	Allowances will be allocated in a two-stage approach that initially allocates allowances at sector level and then distributes the sector allocation between the installations within each sector.	Section 2 & Appendix B
6	Allocations at sector level will be made on the basis of the sector's projected business as usual (BAU) emissions from 2008 to 2012, apart from allocations to the LEP sector. The creation of different sectors allows for recognition of differences in output and emissions growth rates, and requires that installations be classified into sectors. The UK is allocating to 19 sectors in Phase II, including a Good Quality Combined Heat and Power (GQ CHP) sector.	Section 2 & Appendix B
7	The UK has decided to introduce a GQ CHP sector for Phase II. All CHP installations certified under the UK's CHP Quality Assurance Programme will be classified in the GQ CHP sector.	Section 2 & Appendix B

<sup>6</sup> Phase totals have been calculated without rounding annual figures to the nearest integer.

<sup>7</sup> The Large Electricity Producers (LEP) sector was previously referred to as the Electricity Supply Industry (ESI).

8	<p>Allocations at installation level will be made on the basis of each installation's share of "relevant emissions". Relevant emissions are generally the average dropping the lowest year of emissions during the baseline period (2000 - 2003). Allocation Methodology Rules are available for calculating relevant emissions of:</p> <ul style="list-style-type: none"> <li>• Installations where changes have taken place during or after the baseline period;</li> <li>• Installations where rationalisation of production has taken place during or after the baseline period;</li> <li>• Installations that have undergone temporary closure during the baseline period;</li> <li>• Installations that had the first year of operation during the baseline period.</li> </ul> <p>A benchmarking methodology will be used for the LEP sector.</p>	Section 3 & Appendix C
9	<p>A number of allowances will be set-aside in a New Entrant Reserve (NER) to be allocated for free to installations that commence or extend the operation of an Annex I activity, between 1 January 2008 and 31 December 2012.</p> <p>The NER will contain additional allowances to provide Phase II allocations for new entrants that start operation towards the end of Phase I (between 30 June 2006 and 31 December 2007). Part of the NER will be ring-fenced for use by GQ CHP new entrants.</p> <p>The NER will comprise 81,601,251 allowances, representing 6.6% of the total number of allowances to be allocated for Phase II. 8.5 million of the allowances in the NER are primarily intended to provide Phase II allowances for later Phase I new entrants (including some allowances from the CHP NER). 27.5 million allowances will be for use by GQ CHP installations and 2.4 million allowances will form a contingency fund.</p>	Appendix D
10	<p>Where a closure has taken place, no allocation shall be made to the installation in the years after that in which it closed.</p>	Appendix D
11	<p>GQ CHP new entrants will be allocated at 100% of the benchmarked amount of allowances as presented in the NE spreadsheet - to act as an incentive to use CHP. New entrant boilers and other generators will be allocated at 90% of the benchmarked amount of allowances as presented in the NE spreadsheet. The LEP sector cap (following deduction of allowances for auctioning) has been set 30.3% below the BAU projection for the sector. LEP new entrants will be subject to this same cut in allocation. All other new entrants will be allocated at 95% of the benchmarked amount of allowances presented in the NE spreadsheet. An additional adjustment is made in respect of CHP.</p>	Appendix D
12	<p>Any surplus allowances that may remain in the NER and those that are not issued to installations that have closed, up to a limit of 3% of the total number of allowances, will be auctioned or otherwise sold. Surplus allowances above this limit will be cancelled.</p>	Appendix D



## 1. DETERMINATION OF THE TOTAL QUANTITY OF ALLOWANCES

*What is the Member State's emission limitation or reduction obligation under Decision 2002/358/EC or under the Kyoto Protocol (as applicable)?*

- 1.1 The overall EU commitment under the Kyoto Protocol is to reduce emissions of greenhouses gases by 8% below 1990 levels by 2008-2012. The UK's commitment under the Burden Sharing Agreement<sup>8</sup> is to reduce its emissions of greenhouse gases by 12.5% below base year<sup>9</sup> levels by 2008-2012. The UK's target annual level of emissions implied by the Burden Sharing Agreement is 682 million tonnes of carbon dioxide (MtCO<sub>2</sub>) equivalent<sup>10</sup> calculated from data in the UK's 2004 inventory submission, which has been provided to the EU and to the UNFCCC and contains estimates from 1990 to 2004 inclusive.
- 1.2 In addition to these international commitments, the UK has a domestic goal of reducing carbon dioxide (CO<sub>2</sub>) emissions by 20% below 1990 levels by 2010. The updated Climate Change Programme, published on 28 March 2006<sup>11</sup> confirmed our commitment to this goal and set out the additional measures to be taken to reduce emissions further to take the UK closer towards the goal. The UK Government's Energy White Paper, which was published in February 2003, set the framework for putting the UK on a path to a reduction in CO<sub>2</sub> emissions of 60% by 2050, with real progress by 2020. This has been reiterated in the Energy Review published in July 2006<sup>12</sup>, which details further measures totalling 11-17 million tonnes of carbon savings (40-62 MtCO<sub>2</sub>) by 2020.
- 1.3 The UK published revised emissions data in August 2006<sup>13</sup>. Total annual emissions of all greenhouse gases for 2004 were estimated to be 662MtCO<sub>2</sub> equivalent and emissions of CO<sub>2</sub> were estimated to be 559MtCO<sub>2</sub>. The data show falls of 15.1% for all greenhouse gases between the base year and 2004 and 5.6% for CO<sub>2</sub> emissions between 1990 and 2004. Current projections are that the UK will have reduced Kyoto greenhouse gases by 23.6% in 2008-2012.

<sup>8</sup> Council Decision 2002/358/EC

<sup>9</sup> 1990 for emissions of carbon dioxide, methane and nitrous oxide, 1995 for fluorinated compounds.

<sup>10</sup> Consistent with the provisions of the Annex to COP decision 19/CP.7 on the treatment of land-use change and forestry in the accounting of the assigned amount.

<sup>11</sup> See <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/index.htm>

<sup>12</sup> See: <http://www.dti.gov.uk/energy/review/page31995.html>

<sup>13</sup> For the latest emissions projections see <http://www.defra.gov.uk/news/2006/060807a.htm>. Emissions data for 2005 will be published by Defra in January 2007.

*What principles, assumptions and data have been applied to determine the contribution of the installations covered by the emissions trading Directive to the Member State's emission limitation or reduction obligation (total and sector historical emissions, total and sector forecast emissions, least-cost approach)? If forecast emissions were used, please describe the methodology and assumptions used to develop the forecasts.*

- 1.4 The emissions projections of the non-CO<sub>2</sub> greenhouse gases covered by the Kyoto Protocol – methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride - are broadly consistent with the assumptions underlying the projections of CO<sub>2</sub> emissions published by the Department of Trade and Industry (DTI)<sup>14</sup>. The non-CO<sub>2</sub> projections have been developed for thirteen different sectors and sub-sectors based on information from experts and stakeholders from Government departments, industry and other organisations' technical literature and studies undertaken for the Department for Environment, Food and Rural Affairs (Defra). The methodologies for calculating emission projections are updated annually and refined as and when improved information is available.
- 1.5 Updated energy and emissions projections, which cover projections of CO<sub>2</sub> emissions for the UK economy, were published in November 2004 as an input to the Phase I NAP and the Climate Change Programme Review. These projections have since been updated to reflect revised fuel price assumptions, output growth rates and an evaluation of carbon savings being delivered by the Climate Change Programme. Further information on the evaluation of these measures is included as part of the Climate Change Programme 2006 documentation<sup>15</sup>.
- 1.6 As part of the development of the UK Phase II NAP, Oxford Economic Forecasting and the Carbon Consortium were commissioned to develop emissions projections for industrial sectors covered by the EU ETS.
- 1.7 Both sets of projections were published for consultation in February 2006<sup>16</sup>. A summary of the revisions following this consultation was published in August 2006<sup>17</sup>. The projections are business as usual (BAU) projections assuming the absence of the EU ETS and therefore form the baseline for informing the decision on the contribution of the EU ETS to overall UK carbon reductions.

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<sup>14</sup> The non-CO<sub>2</sub> projections have been updated for consistency with the GHG inventory published in 2006. CO<sub>2</sub> energy projections are based on the GHG inventory published in 2005, which agrees to about 0.01% with the inventory published in 2006 for average total CO<sub>2</sub> emissions over the period 1990 to 2003, with individual years differing by up to about 0.4%. The energy projections will be updated to be based on the inventory published in 2006 in due course.

<sup>15</sup> See: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/synthesiscppolicy-evaluations.pdf>

<sup>16</sup> <http://www.dti.gov.uk/energy/environment/projections/recent/page26391.html>

<sup>17</sup> <http://www.dti.gov.uk/files/file32287.pdf>

- 1.8 The principles and assumptions used to develop the projections are set out in Section 2 and Appendix B.

*What is the total quantity of allowances to be allocated (for free and by auctioning)?*

- 1.9 The cap on allowances in the UK in the second phase of the EU ETS (2008-2012) will be 1230,879,991 or 246,175,998 per year<sup>18</sup>. This total is made up of 219,332,490 allowances per year for the installations and emissions covered by the UK Phase I NAP, plus 9,611,188 per year to account for expansion of the scope, and 17,232,320 per year for auction or sale. The total quantity allocated will be reduced in the final allocation decision to account for small emitters in the ceramics sector or covered by the de minimis threshold<sup>19</sup>.
- 1.10 In determining the final total allocation, a number of factors were considered:
- Changes in emissions projections and the reconciliation of 2005 emissions against allocations;
  - The latest information on electricity prices and their impact on industry and households;
  - The responses to the draft NAP consultation;
  - The intentions for allocation against business as usual, where known, of other Member States;
  - Final decisions on the UK's proposed allocation for Phase I of the Scheme;
  - Availability of project credits from the Joint Implementation and Clean Development Mechanism systems.
- 1.11 The reduction in allowances against business as usual will be borne entirely by the Large Electricity Producers (LEP) sector<sup>20</sup>, as in Phase I. This sector is relatively insulated from international competition and can pass on the cost of carbon to consumers. For Phase II, the LEP sector has been defined to reflect these characteristics as closely as possible<sup>21</sup>.
- 1.12 The allocation will be equally distributed over the five years of the second phase.
- 1.13 93% of the total quantity of allowances will be allocated for free to installations covered by the Scheme.
- 1.14 7% of the total quantity of allowances will be auctioned, or otherwise sold in Phase II. The allowances to be auctioned or sold will be deducted from the allocation to the LEP sector. In addition any allowances arising

<sup>18</sup> Phase totals have been calculated without rounding annual figures to the nearest integer.

<sup>19</sup> See section 8 for further information.

<sup>20</sup> The Large Electricity Producers (LEP) sector was previously referred to as the Electricity Supply Industry (ESI).

<sup>21</sup> See section 3.5 below.

from closures or surplus from the New Entrants Reserve may be auctioned or sold (see 1.18 below).

- 1.15 A New Entrant Reserve (NER) will provide free allowances to eligible new installations, those existing installations that extend in line with the eligibility criteria (as set out in section E of Appendix D) and later Phase I new entrants (those commencing operations after 30 June 2006). The NER will total 81,601,251 (6.6% of total allowances)<sup>22</sup>. Contributions to the NER by sectors are explained in section C of Appendix D. The proposed policy for dealing with closure of installations is set out in section F of Appendix D. 8.5 million allowances will be used to provide Phase II allowances for later Phase I new entrants (those that start between 30 June 2006 and 31 December 2007, including some GQ CHPs). 27.5 million allowances will be earmarked for GQ CHP new entrants and 2.4 million allowances will form a contingency fund.
- 1.16 2.4 million allowances in the NER will act as a contingency fund of allowances, specifically to provide for installations that may have been allocated an incorrect number of allowances as a result of administrative error or installations in expansion sectors which were issued with a Greenhouse Gas (GHG) permit too late for inclusion in the NAP.
- 1.17 Allocation of these allowances will be carried out on a case-by-case basis according to the methodology set out in section J of Appendix D. The contingency fund will not be topped up by allowances from closure, and if it still contains some allowances after 31 December 2009, a decision will be taken as to whether they should revert to being part of the main NER.
- 1.18 Allowances remaining in the NER in Phase II and allowances not allocated to closed installations will be auctioned or otherwise sold. It is estimated that the amount of allowances generated through closures and surplus will not exceed 1% of the total quantity of allowances. An upper limit will be set at 3% of the total quantity of allowances<sup>23</sup>.

*What is the proportion of overall emissions that these allowances represent in comparison with emissions from sources not covered by the emissions trading Directive? Does this proportion deviate from the current proportion of emissions from covered installations? If so, please give reasons for this deviation with reference to one or more criteria in Annex III to the Directive and/or to one or more other objective and transparent criteria.*

- 1.19 The EU ETS covered approximately half of total UK CO<sub>2</sub> emissions in 2003 and the non-traded sectors covered the remaining 50%. Average projected CO<sub>2</sub> emissions for the traded sector for Phase II (including

<sup>22</sup> The NER represents 6.6% of the total number of allowances prior to the deduction of allowances to be auctioned and 7.1% of the allowances to be allocated for free (see Appendix D)

<sup>23</sup> As there is a 10% limit on auctioning in Phase II, this 3% limit will set the maximum level of auctioning in the UK at 10%. Any surplus allowances above this limit will be cancelled.

emissions to which the UK is expanding in Phase II) cover about 52% of total UK CO<sub>2</sub> emissions<sup>24</sup>. The total level of allowances represents around 47% of average total projected UK CO<sub>2</sub> emissions for Phase II (2008-2012).

*What policies and measures will be applied to the sources not covered by the emissions trading Directive?*

1.20 The UK Climate Change Programme 2006, published in March, is designed to deliver the UK's Kyoto Protocol target of reducing emissions of the basket of six greenhouse gases by 12.5% below base year levels over the commitment period 2008-2012. It also contains new measures to take the UK closer to the Government's domestic goal to reduce CO<sub>2</sub> emissions by 20% below 1990 levels by 2010. It aims to position the UK so that it can make real progress by 2020 towards the goal of cutting CO<sub>2</sub> emissions by some 60% by about 2050, as set out in the Energy White Paper 2003, and has been reiterated in the Energy Review 2006.

1.21 The Climate Change Programme is based on a number of principles:

- the need to take a balanced approach with all sectors and all parts of the UK playing their part;
- the need to safeguard, and where possible enhance, the UK's competitiveness, encourage technological innovation, promote social inclusion and reduce harm to health;
- the need to focus on flexible and cost effective policy options which will work together to form an integrated package;
- the need to take a long term view, looking to targets beyond the first Kyoto commitment period and considering the need for the UK to adapt to the impacts of climate change; and
- the need for the Programme to be kept under review.

*Will use be made of the flexible mechanisms of the Kyoto Protocol? If so, to what extent and what steps have been taken so far (e.g. advancement of relevant legislation, budgetary resources foreseen)?*

1.22 The UK is on course to exceed its Kyoto Protocol target (see paragraph 1.3). It is not intended that any use will be made of the flexible mechanisms by the Government to meet its Burden Sharing Agreement target. The limit on the use of project credits by installations, under the Linking Directive, is set out below.

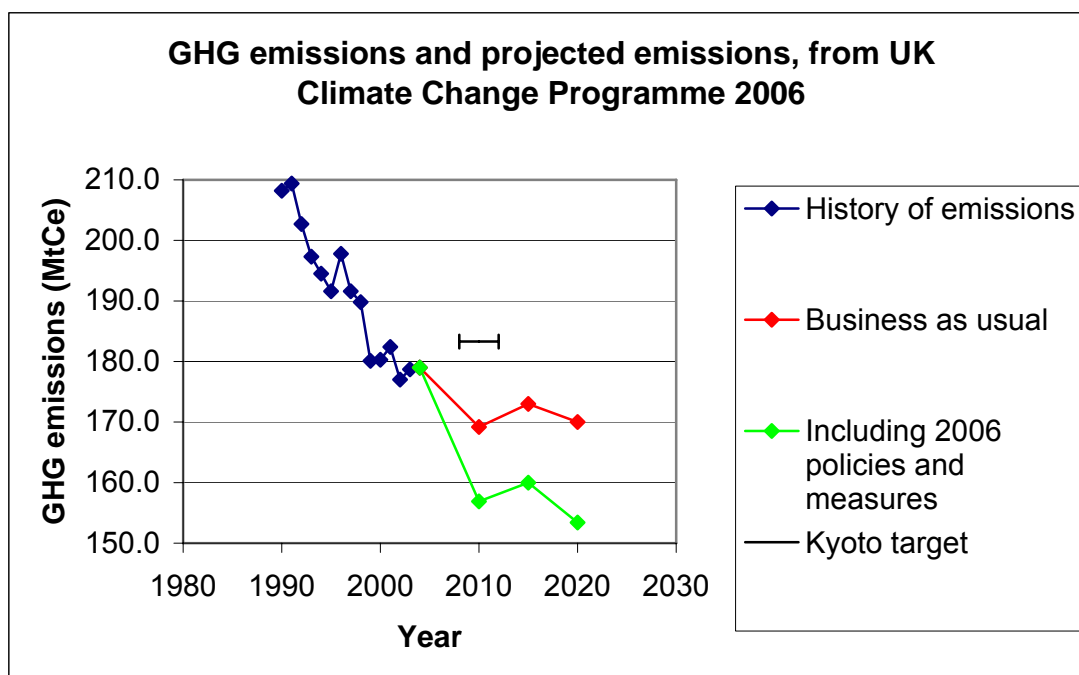
<sup>24</sup> See <http://www.dti.gov.uk/files/file26363.pdf> for projections of total UK CO<sub>2</sub> emissions

*How has national energy policy been taken into account when establishing the total quantity of allowances to be allocated?*

- 1.23 The Energy White Paper, published in February 2003, set the overall goals for UK energy policy for the long term, and these have been reiterated in the 2006 Energy Review. The four goals are: to put ourselves on a path to cut the UK's CO<sub>2</sub> emissions - the main contributor to global warming - by some 60% by 2050 with real progress by 2020; to maintain the reliability of energy supplies; to promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve our productivity; and to ensure that every home is adequately and affordably heated.
- 1.24 While all the Energy White Paper goals have been considered in determining the total quantity of allowances to be allocated, the most central has been that on the reduction of CO<sub>2</sub> emissions. In particular, as part of the White Paper's longer-term commitments, the UK has a goal to move towards a 20% reduction in CO<sub>2</sub> emissions on 1990 levels by 2010. The White Paper also sets out that the EU ETS will be "the central plank of our future emissions strategy".
- 1.25 National energy policy has been further incorporated within the Updated Energy and Emissions Projections through inclusion within the projections of the impact of existing Government climate change measures. The projections are based on the DTI's energy model, which assumes cost minimisation behaviour in line with the emphasis of energy policy on competitive markets. The effect of specific government measures regarding the Renewables Obligation and Combined Heat and Power (CHP) have also been included in the projections.

*Is the total quantity of allowances intended to be allocated consistent with a path towards achieving or overachieving the Member State's target under Decision 2002/358/EC or under the Kyoto Protocol (as applicable)?*

- 1.26 As indicated above, the UK has decided that the level of allowances to be allocated for the second phase of the Scheme should be below the total projected BAU emissions for the installations covered by the Scheme during the period. The total quantity of allowances to be allocated is therefore consistent with overachieving the UK's Burden Sharing Agreement (see paragraph 1.3 and Chart 1).
- 1.27 Chart 1 illustrates the UK's greenhouse gas emissions projections incorporating the policies and measures, including the EU ETS, set out in the Climate Change Programme 2006.



- 1.28 The projected carbon savings for individual policies and measures, as outlined in the UK Climate Change Programme 2006, were determined by analytical experts sitting on the UK Interdepartmental Analysts Group (IAG). IAG Guidelines ensure that there is separation between those who propose policy, and IAG members who analyse and appraise the impact.
- 1.29 Full guidelines for evaluation and appraisal of policies to reduce greenhouse gas emissions are available on the Defra website<sup>25</sup>.
- 1.30 A complete report, *Synthesis of Climate Change Policy Evaluations*, detailing the evaluation of policies and measures announced in the UK Climate Change Programme 2000 is also available<sup>26</sup> and a report on the analysis of policies and measures announced in the UK Climate Change Programme 2006 will be published shortly.
- 1.31 Policies and measures announced in the UK Climate Change Programme 2000 were designed to reduce UK greenhouse gas emissions through to 2010. Although these policies and measures continue to have an impact beyond 2010, the impacts of economic growth on UK emissions is such that there is a predicted rise in greenhouse gas emissions between 2010 and 2015. Latest UK government projections, which include the impact of policies and measures in the UK Climate Change Programme 2006 (but not the impact of Phase II of the EU ETS) confirm this trend. The UK Government will therefore be looking at ways to reduce greenhouse gas emissions in the longer term. The recently published UK Energy Review

<sup>25</sup> See: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/greengas-policyevaluation.pdf>

<sup>26</sup> See: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/synthesiscppolicy-evaluations.pdf>

2006 proposes policies and measures that will deliver an additional saving of between 40 and 62 MtCO<sub>2</sub> (excluding the EU ETS) by 2020, beyond those savings outlined in the UK Climate Change Programme 2006. The impacts of the Energy Review on UK greenhouse gas emissions projections has not yet been quantified.

*How is it ensured that the total quantity of allowances to be allocated is not more than is likely to be needed for the strict application of the criteria of Annex III?*

1.32 The total number of allowances is based on projections which take into account the effects of policies and measures designed to secure delivery of the UK's Burden Sharing Agreement target and to move towards the more challenging domestic goals. The total number of allowances allocated annually in Phase II will be 29.6 MtCO<sub>2</sub> below the projected annual emissions from the installations covered by the Scheme<sup>27</sup>. The UK Government estimates that together these measures will reduce greenhouse gas emissions in the 2008-2012 period by 23.6% below 1990 levels against a Kyoto target to reduce emissions by 12.5% and this requirement is therefore satisfied.

*How is consistency with the assessment of actual and projected emissions pursuant to Decision 93/389/EEC ensured?*

1.33 The actual and projected emissions presented here are consistent with information contained in:

- submissions to the EU in January 2006<sup>28</sup>, reporting GHG inventory data for 1990 to 2004;
- the UK's report on demonstrable progress under the Kyoto Protocol submitted to the EU in March 2006<sup>29</sup>;
- the revised Climate Change Programme<sup>30</sup>;
- the Energy Review<sup>31</sup>.

<sup>27</sup> Since notification of the NAP to the Commission in August 2006, a number of corrections have been made following public consultation. This has resulted in a fractional increase in projected BAU emissions for the industrial sectors. The total number of allowances to be allocated in Phase II remains unchanged and the level of effort required from the LEP sector has therefore increased from 29.3 MtCO<sub>2</sub> per year to 29.6 MtCO<sub>2</sub> per year, on average. These changes have not affected total UK projections, but will be considered by the UK government along with other updates when the UK projections are next reviewed in 2007.

<sup>28</sup> 2006 inventory submission to EU Monitoring Mechanism under Art 3.1 of Council Decision 280/2004/EC; draft assigned amount report to EUMM under Art 23 of implementing provisions to Decision 280/2004/EC (2005/166/EC)

<sup>29</sup> Report to UNFCCC under Art 5.4 of Council Decision 280/2004/EC

<sup>30</sup> See: <http://www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/synthesiscppolicy-evaluations.pdf>

<sup>31</sup> See: <http://www.dti.gov.uk/energy/review/page31995.html>



*If the Member State intends to auction allowances, please state the percentage of the total quantity of allowances that will be auctioned, and how the auction will be implemented.*

- 1.34 As set out above, the UK will auction, or otherwise sell, 7% of the total number of allowances in Phase II. This equates to 17,232,320 allowances per annum. The allowances to be auctioned will be deducted from the allocation to the LEP sector.
- 1.35 In addition, the Government will auction, or otherwise sell, surplus allowances in the new entrant reserve, and any allowances that are not allocated as a result of closure. It is estimated that the amount of allowances generated through closures and surplus will not exceed 1% of the total quantity of allowances. An upper limit will be set at 3% of the total quantity of allowances. As there is a 10% limit on auctioning in Phase II, this 3% limit will set the maximum level of auctioning in the UK at 10%. Any surplus allowances above this limit will be cancelled.
- 1.36 It is the Government's long-term objective to move away from free allocation of allowances so that the full cost of carbon is taken into account by business in making investment decisions. There is no set timetable for achieving this objective, which will be dependent in many respects on the outcome of the European Commission's review of the Emissions Trading Directive and the ability to adopt a harmonised European framework for such a change.
- 1.37 A consultancy report published in August 2005<sup>32</sup> outlined the advantages and disadvantages of holding an auction compared to selling allowances in the market and identified scenarios when one method of disposal or the other may be preferable. The report's recommendations will be taken into account in developing detailed plans for disposing of the allowances, along with input from stakeholders.
- 1.38 The Government may learn from the experience of auction or sale of any new entrant reserve surplus in Phase I as well as from other Member States that have undertaken auctioning of allowances during Phase I and is exploring prospects for working with other Member States to assess opportunities for collaboration on auctioning for Phase II. Further analysis will be undertaken on the options for auctioning and sale for the Phase II period.

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<sup>32</sup> See: <http://www.defra.gov.uk/corporate/consult/euets-salemethods/erm-consultreport.pdf>

*Proposed limit on use of project credits*

- 1.39 The Emissions Trading Directive requires that, for the second phase of the Scheme, Member States impose a limit on the use of credits from Clean Development Mechanism (CDM) and Joint Implementation (JI) projects for use in compliance. This reflects the recognition in the Kyoto Protocol and the Marrakech Accords that the use of credits obtained through these mechanisms should be supplemental to domestic action by Annex I signatories.
- 1.40 The Government has set a limit on the use of project credits from JI and CDM of 8% of each installation's free allocation. This percentage represents approximately two thirds of the 'effort' required by UK installations in Phase II. Effort is calculated as the difference between projected business as usual emissions and the total allocation of allowances (29.6MtCO<sub>2</sub> per annum).
- 1.41 The 8% limit will apply to allocations to LEP installations prior to the deduction of allowances to be auctioned. This is equivalent to 9.3% of free allocations to LEP installations.
- 1.42 The limit on the use of project credits will be set annually, at installation level. Banking will, however, be allowed between years, so that installations that do not use their entitlement in one year of the period may carry these over for use in the following year.

## 2. DETERMINATION OF THE QUANTITY OF ALLOWANCES AT ACTIVITY LEVEL

*By what methodology has the allocation been determined at activity level? Has the same methodology been used for all activities? If not, explain why a differentiation depending on activity was considered necessary, how the differentiation was done, in detail, and why this is considered not to unduly favour certain undertakings or activities within the Member State.*

2.1 The UK has decided to use a two-stage approach to allocate allowances to EU ETS participants. First, the total number of allowances is allocated to sectors as set out in this section. The sector level allocations are then further distributed to individual installations within those sectors as described in section 3.

### 2.1 Expansion

2.2 The Commission published further NAP guidance in December 2005<sup>33</sup>, which aims to reduce distortions arising from the implementation of Phase I across the EU and seeks greater harmonisation of scope by highlighting a number of specific activities that should be included in Phase II.

2.3 A key priority for the UK in Phase II has been to address any ‘gaps’, anomalies or competitive distortions that may have arisen in Phase I of the Scheme. The UK has also looked at whether installations have significant additional CO<sub>2</sub> emissions that could be included for the second phase. Detailed analysis was undertaken to assess feasibility and appropriateness for expansion during the development of the Phase II NAP.

2.4 The UK has expanded the scope of the Scheme for Phase II according to the definitions agreed at Climate Change Committee on 31 May 2006 where appropriate to cover additional CO<sub>2</sub> emissions from glass; rock wool; gypsum; flaring from offshore oil and gas production; petrochemicals (crackers); carbon black; and integrated steelworks<sup>34</sup>.

### 2.2 Sector Classification

2.5 For Phase II, the UK is classifying sectors according to the categorisation given in Table 2.1. Annual sector allocations for the 2008-2012 period and contributions to the New Entrant Reserve (NER) are given in Table 2.2. Details of the reasoning behind this sector classification are set out in Appendix B.

<sup>33</sup> Available from: [http://europa.eu.int/comm/environment/climat/pdf/nap\\_2\\_guidance\\_en.pdf](http://europa.eu.int/comm/environment/climat/pdf/nap_2_guidance_en.pdf)

<sup>34</sup> Further information (including definitions) is available on the Defra website at: <http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/allocation.htm>

**Table 2.1 Phase II sectors**

Large Electricity Producers (LEP)
Refineries
Offshore (including flaring)
Iron and Steel (including expanded coverage of integrated iron and steel)
Cement
Lime
Ceramics
Glass
Pulp and paper
Chemicals (including crackers and carbon black)
Food and Drink
Aluminium
Services
Other Electricity Producers
Downstream Gas
Others A (Gypsum, Mineral Wool including rock wool)
Others B (Aerospace, Vehicles, Semi-Conductors, Woodboard)
Others C (Munitions, Textiles, Tyres, Tobacco, Other non-metallic minerals)
Good Quality CHP

2.6 The UK has decided that Large Electricity Producers (LEP) should be defined for these purposes as any operator of a combustion installation (except a hazardous or municipal waste installation):

- a. which has a thermal rated input of above 20 megawatts; and
- b. which generates electricity and is normally capable of exporting more than 100 megawatts of electrical power to either the total system in Great Britain<sup>35</sup> or the total system in Northern Ireland<sup>36</sup>; and
- c. for which the operator is not exempted under section 5 of the Electricity Act 1989<sup>37</sup> or, as the case may be, Article 9(1) of the Electricity (Northern Ireland) Order 1992 from the requirement to hold a generation licence.

2.7 Details of the reasoning behind this definition are set out in Appendix B. More details on the allocation methodology for the LEP sector are set out in Section 3.

<sup>35</sup> “The total system in Great Britain” means all transmission and distribution systems located in Great Britain which are operated (in the case of transmission systems) by persons who hold a licence under section 6(1)(b) of the Electricity Act and in the case of distribution systems) by persons who hold a licence under section 6(1)(c) of the Act. (These are licences authorising respectively the transmission and distribution of electricity.)

<sup>36</sup> “The total system in Northern Ireland” means the transmission systems, located in Northern Ireland, which are operated by persons who hold a licence under Article 10(1)(b) of the Electricity (Northern Ireland) Order 1992.

<sup>37</sup> See: [http://www.opsi.gov.uk/acts/acts1989/Ukpga\\_19890029\\_en\\_1.htm](http://www.opsi.gov.uk/acts/acts1989/Ukpga_19890029_en_1.htm)

2.8 The UK has decided to introduce a Good Quality Combined Heat and Power (GQ CHP) sector for Phase II. All CHP installations certified under the UK's CHP Quality Assurance Programme (CHPQA) will be classified in the GQ CHP sector<sup>38</sup>. This eligibility criterion has been chosen because it is the only existing way of identifying CHP accurately in the UK. More details on the allocation methodology for the GQ CHP sector are set out in Section 3.3.

2.9 Other installations have been classified according to the main product they produce. More details are set out in Appendix B.

### 2.3 Sector allocations

2.10 The UK has decided that the allocation of allowances to the sectors covered by the EU ETS will be determined as follows:

- All sectors other than LEP will be allocated allowances equivalent to their projected BAU emissions taking into account the potential, including technological potential of sectors to reduce their emissions, a deduction for estimated new entry and a contribution to the CHP ring fence of the NER.
- LEP will be allocated the remainder of the total of the overall UK cap taking into account a deduction for the amount of allowances to be auctioned and a contribution to the NER. Thus, the LEP sector will receive a reduced allocation to account for the carbon savings the UK expects the trading sector to deliver.

2.11 Large Electricity Producers are relatively insulated from international competition and are able to pass through the costs of carbon to consumers in the form of higher electricity prices. This pass through is likely to occur regardless of whether the allowances have been allocated for free. The sector is therefore able to face a reduction in its allocation without a substantial impact on its competitive position. For this reason the UK has decided that the LEP sector should receive a lower level of free allocation, both as a result of the decision on the overall cap and auctioning. Further details about the rationale for this are set out in Appendix B.

2.12 Table 2.2 sets out the amount of allowances to be allocated to each sector.

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<sup>38</sup> For more information on the UK's CHPQA programme please see <http://www.defra.gov.uk/environment/energy/chp/index.htm>.

## 2.4 New Entrant Reserve

- 2.13 The Government has decided to create a New Entrant Reserve (NER) of allowances for installations that start or extend operations between 2008 and 2012. This will also include additional allowances to provide Phase II allocations for installations that start or extend operations between 1 July 2006 and 31 December 2007. The emissions projections for each sector take account of growth, including provision for new entrants, as the output growth assumptions reflect the demand for a particular industrial product without regard to whether it is being produced by a new entrant or an existing installation.
- 2.14 Contributions to the NER in each sector are deducted from the total allocation to that sector before distributing the remainder to existing installations. Appendix D sets out details of how contributions to the NER have been calculated.
- 2.15 To estimate the projected BAU emissions from the EU ETS covered sectors, the UK has used its energy model (UEP) and independent projections by Oxford Economic Forecasting (OEF) as described in Appendix B. The projected emissions for each EU ETS sector are calculated after incorporating the effects of current Climate Change Programme policies and measures on that sector. A separate consultation on these projections was launched in February 2006<sup>39</sup>. The projections that will be used for Phase II, and a full response to the consultation, were published in August 2006<sup>40</sup>.
- 2.16 Further details of the different methodologies used to calculate the sector total for each of the EU ETS sectors are presented in Appendix B. The methodology described above is intended to provide each sector, other than the LEP sector, with an allocation based on need, taking into account existing policy commitments. The projections do not account for the impact of the EU ETS itself.
- 2.17 The approaches taken to calculating sector totals as outlined above are intended to provide robust estimates of the projected emissions of the various sectors. As such, although the methodology of calculation varies between sectors, the calculation for any individual sector should not unduly favour certain undertakings or activities within the UK.
- 2.18 Table 2.2 summarises the approach outlined above and the proposed sector caps for Phase II.

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<sup>39</sup> See: <http://www.dti.gov.uk/energy/environment/projections/recent/page26391.html>

<sup>40</sup> See: <http://www.dti.gov.uk/energy/environment/euets/phase2/projections/page32624.html>

**Table 2.2: Emissions Projections and NER contributions**

Phase II sector	Annual Allocation tCO <sub>2</sub> <sup>41</sup>	% Contribution to NER [3]	Allocation to existing installations
<b>Large Electricity Producers</b>	107,421,556	7.3%	99,534,205
<b>CHP</b>	24,745,437	13.3%	21,462,484
<b>Refineries</b>	15,417,590	2.1%	15,098,072
<b>Offshore [1]</b>	20,197,232	11.4%	17,886,325
<b>Iron and Steel [1]</b>	24,380,992	2.7%	23,727,929
<b>Cement</b>	11,247,642	2.7%	10,948,556
<b>Lime</b>	2,760,069	2.1%	2,702,868
<b>Glass</b>	2,291,758	2.7%	2,230,818
<b>Ceramics</b>	1,898,407	2.9%	1,842,944
<b>Pulp and Paper</b>	1,054,135	2.1%	1,032,289
<b>Aluminium</b>	2,854,101	2.1%	2,794,952
<b>Chemicals [1]</b>	5,587,626	3.9%	5,369,160
<b>Food and Drink</b>	1,734,773	3.0%	1,681,889
<b>Services</b>	1,549,424	8.1%	1,424,524
<b>Downstream Gas</b>	2,157,406	35.2%	1,398,823
<b>Other Electricity Producers</b>	1,316,558	2.1%	1,289,273
<b>Others A [1] [2]</b>	950,551	10.1%	854,845
<b>Others B [2]</b>	1,088,282	2.7%	1,059,344
<b>Others C [2]</b>	290,141	2.1%	284,128
<b>Total free allocation</b>	<b>228,943,678</b>	<b>7.1%</b>	<b>212,623,428</b>
<b>Allowances to be auctioned</b>	17,232,320		
<b>Total allowances</b>	<b>246,175,998</b>	<b>6.6%</b>	

[1] Including expansion to offshore flaring, integrated iron and steel works, crackers and carbon black, rock wool and gypsum

[2] 'Others A' comprises Mineral Wool and Gypsum. 'Others B' comprises Aerospace, Vehicles, Semi-conductors and Woodboard. 'Others C' comprises Tobacco, Textiles, Other non-metallic minerals, Tyres, and Munitions.

[3] Details of the calculations underlying these contributions can be found in Table D.1 and are a combination of the contribution required to cover Phase II new entrants, any later Phase I new entrants and a contribution to the CHP ring fence.

*If the potential, including the technological potential, of activities to reduce emissions was taken into account at this level, please state so here and give details in Section 4.1 below.*

2.19 The potential, including the technological potential of activities to reduce emissions has been taken into account in the development of emissions projections, which includes consideration of the cost-effective abatement potential in different sectors. Further detail is given in Section 4.1

<sup>41</sup> These sector figures are rounded to the nearest integer. The figures do not sum to the total due to rounding.

*If Community legislative and policy instruments have been considered in determining separate quantities per activity, please list the instruments considered in Section 5.3 and state which ones have been taken into account and how.*

2.20 The emissions projections are based on modelling which takes account of specific Community legislative and policy instruments. Further detail is given in section 5.2.

*If the existence of competition from countries or entities outside the Union has been taken into account, please explain how.*

2.21 Large Electricity Producers will receive a reduced allocation to reflect (a) the emissions savings expected of the trading sector in Phase II and (b) the auctioning or sale of 7% of the total number of allowances. The sector can pass through the full costs of EU ETS without substantially impacting its competitive position. This is because almost all producers of electricity will continue to be UK based in the 2008-2012 period and are thus relatively insulated from international competition. Furthermore, the sector does not face additional indirect costs of the EU ETS that impact on their competitive position as the generation of electricity is not 'electricity intensive' to produce. Further detail is given in Appendix B.

2.22 Imposing reductions below BAU on sectors other than the LEP may impact the competitive position of these sectors. In addition, there is a risk attached to assuming that all sub-sectors within the same category face similar energy intensities and/or competition structure. There are difficulties relating to defining and matching trade data accurately to ensure that we are targeting products that are mostly trading<sup>42</sup> in UK and/or EU markets and avoid increasing costs to those that are trading elsewhere. Further detail is set out in Appendix B and the Regulatory Impact Assessment.

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<sup>42</sup> Trading in this case refers to manufacture, distribution and retail. Allocation to sectors below need could encourage some companies to shift production abroad while continuing to sell in the UK – a particular concern, for example, for the cement sector.



### 3. DETERMINATION OF THE QUANTITY OF ALLOWANCES AT INSTALLATION LEVEL

*By what methodology has the allocation been determined at installation level? Has the same methodology been used for all installations? If not, please explain why a differentiation between installations belonging to the same activity was considered necessary, how the differentiation by installation was done, in detail, and why this is considered not to unduly favour certain undertakings within the Member State.*

#### 3.1 Introduction

3.1 This section describes the methodology for distributing the sector allowances set out in Section 2 to incumbent installations in Phase II (i.e. the allocation methodology for those operations in existence before 30 June 2006). The methodology for installations that commenced operation following 30 June 2006 is set out in Appendix D.

3.2 The allowances available to distribute to incumbent installations are those remaining after deductions from the total sector allowances for contributions to the new entrant reserve and any other deductions as set out in Section 2.

#### 3.2 The standard allocation methodology

3.3 With the exception of the Large Electricity Producers (LEP) sector, where allocations are determined via a benchmark (see section 3.5) each installation's allocation is determined using its own calculated "relevant emissions" and the sum of the "relevant emissions" of all incumbent installations in its sector. The formula used is:

$$\text{Total Phase II incumbent's allocation} = \frac{\text{Incumbent's relevant emissions}}{\text{Sum of relevant emissions of all incumbents in sector}} \times \text{Total available allowances in sector}$$

3.4 The UK has decided that the standard allocation methodology for Phase II incumbents shall be based on historic emissions. This is because historic emissions data are readily available, it is in line with the Directive, experience of using historic emissions data in Phase I means operators understand its use and consequences, it is the most feasible approach within the timescales for submission of the Phase II NAP. The use of historic emissions also compensates for stranded assets and takes into account action since the start of the baseline period.

3.5 Emissions data from 2000 onwards is used for the determination of individual allocations, as it is accurate, available and verifiable. Early data that was used in Phase I (1998-1999) will not be used for Phase II

as it is least likely to represent patterns of emissions for Phase II and it represents the poorest quality data and fewest complete data sets. Government ruled out the use of 2004 data *across all sectors*<sup>43</sup> because:

- it cannot be demonstrated that use of 2004 data would make a material difference to allocations, reflecting structural changes in their industry;
- there are significant costs involved with collecting and verifying this data for all installations in all sectors;
- it might create incentives in some sectors that were able to emit more rather than less in 2004; and
- it may reward less efficient plants for continuing to emit at high levels.

3.6 However, 2004 data may be used for some installations where earlier historic information is unavailable.

3.7 Under the standard methodology, “relevant emissions” for incumbent installations is the average emissions for the baseline period of 2000-2003, excluding the lowest year’s emissions. This calculation acknowledges year on year differences between emissions and allows for an exceptionally low year to be excluded without jeopardising the statistical reliability of the data.

3.8 In more detail, relevant emissions are:

- a) for installations that commenced operation<sup>44</sup> before or in 2000, the average of the three highest annual emissions between 2000 and 2003;
- b) for installations that commenced operation in 2001, the average of the two highest annual emissions between 2001 and 2003;
- c) for installations that commenced operation in 2002, the highest annual emissions in 2002 and 2003;
- d) for installations that commenced operation in 2003, the highest annual emissions in 2003 and 2004;
- e) for installations that commenced operation between 1 January 2004 and 30 June 2006, the output of a benchmark based on their configuration at 30 June 2006.

3.9 Those installations that had insufficient data that received an allocation based on a benchmark in Phase I, will now receive a share of the sector cap based on 2003 and 2004 data. This is to increase the use of historic data without encountering the problems suggested above regarding the use of 2004 data.

3.10 Those Phase I new entrants that are incumbents in Phase II will receive an allocation based on the benchmark for Phase II new entrants. However, they will not receive the absolute allocation suggested by that

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<sup>43</sup> Further detail is in the March 2005 Communication available on the Defra website at:

<http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/phase2-govapproach.pdf>

<sup>44</sup> For this purpose, an installation is considered to have commenced operation when it begins to carry out an Annex I activity.

benchmark. Instead, the amounts prescribed by the benchmark will be treated as if they represent “relevant emissions” in order for those installations to capture a share of the sector cap based on that benchmark. This ensures greater consistency of treatment between incumbent installations. Although the benchmark spreadsheet for Phase II new entrants will be used to calculate the relevant emissions for Phase II incumbents, the rates of reduction set out in Section E5 of Appendix D that will be applied to Phase II new entrants will not be applied to these Phase I new entrants.

- 3.11 Partial closure (i.e. net decreases in capacity) since the end of the 2000-2003 baseline period will not be accounted for in the allocation methodology for Phase II, because:
- the Commission ruled out taking account of partial closure in Phase I – the UK expects that to remain the case in Phase II;
  - the UK ruled out updating historic baselines for Phase II with post-2003 information; and
  - the requirements for operators to declare and quantify the effect of partial closures on their baseline data would be extremely complex and onerous. Such complexity would go against the rationale for using historic data to allocate to the majority of installations in Phase II.
- 3.12 This standard methodology will apply to all Phase II incumbents (including those brought into the Phase II NAP through expansion) unless they have Good Quality CHP schemes on their installations, they are in the LEP and receive a benchmark, or operators apply successfully for Allocation Methodology (AM) rules. More details of these exceptions are provided below.
- 3.13 Installations whose permits are revoked or surrendered by 12 January 2007 will not be included in the Final Allocation Decision.

### **3.3 Good Quality Combined Heat and Power**

- 3.14 The Government will adapt the standard methodology in order to take account of the creation of a Good Quality Combined Heat and Power (GQ CHP) sector for Phase II. All schemes certified under the UK’s CHP Quality Assurance (CHPQA) programme will be included in the GQ CHP sector<sup>45</sup>.
- 3.15 The CHPQA’s assessment of whether a CHP scheme qualifies as Good Quality depends on two key parameters:
- the Quality Index (QI), which is an indicator of the energy efficiency and environmental performance of a scheme; and
  - power Efficiency, which is the total annual power output (TPO) divided by the total annual fuel energy input (TFI).

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<sup>45</sup> Please see Section 2 for more detail.

- 3.16 For Schemes that meet the Threshold QI Criterion, the qualifying power capacity (QPC) is the same as the total power capacity, i.e.  $QPC = TPC$ . For Schemes that do not qualify as Good Quality CHP for the whole of their output, the QPC is calculated as the portion of the power generating capacity that would provide a QI value of 100 for existing schemes, and 105 for new schemes based on design data, under conditions of Maximum Heat Output under Normal Operating Conditions<sup>46</sup>. Such schemes are referred to as partially qualified CHP schemes.
- 3.17 The allocation methodology for the GQ CHP sector will be based on historic emissions from 2001 to 2003. CHP historic emissions data from 2001 is available from the CHPQA database. This approach is consistent with the treatment of the majority of other sectors.
- 3.18 Relevant emissions for GQ CHP schemes are calculated as the average of a GQ CHP scheme's historic emissions from 2001 to 2003, after dropping its lowest year of emissions from the baseline. 2000 is omitted from the calculation because the CHPQA programme began in 2001 and therefore only began to collect accurate and verified data from 2001 onwards.
- 3.19 An adjustment will be made to account for CHP schemes that are partially qualified (i.e. there are some non-GQ CHP parts of the CHP scheme). This will use the average 2001-2003 Qualifying Power Capacity (QPC) to Total Power Capacity (TPC) ratio. The non-Good Quality emissions of the CHP scheme will remain in the "host sector" – i.e. the sector to which the CHP serves a majority of its heat or electricity output. Those parts of the installation will use that host sector's allocation methodology.
- 3.20 The Government is aware that by definition or scope, EU ETS installations often cover technically distinct units that are excluded from the CHP scheme (e.g. a lime kiln or paper plant). In such cases, the split between the GQ CHP scheme and the EU ETS installation will be determined by using the average ratio of annual CHPQA emissions data over 2001 to 2003 to annual EU ETS emissions data over 2001 to 2003. This is to maximise use of historic information while avoiding re-verifying emissions data for both EU ETS and CHP. The non-CHP scheme emissions from the installation will remain in the host sector.
- 3.21 In order to avoid very small portions of emissions remaining in the host or CHP sectors a threshold of 10% will be applied to both the ratio of CHP to EU ETS emissions and the ratio of QPC to TPC. Where applicable, both thresholds will be applied independently to the same installation/scheme (the order does not matter). For example, if a partially qualified CHP scheme has a QPC to TPC ratio of 0.90 or above, and it also accounts for 90% or more of the EU ETS emissions, the total EU ETS emissions relating to that CHP scheme will be included in the

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<sup>46</sup> For more information on the UK's CHPQA programme please see <http://www.defra.gov.uk/environment/energy/chp/index.htm>.

GQ CHP sector. Alternatively, if a partially qualified CHP scheme has a QPC to TPC ratio of 0.10 or less, or its CHP emissions account for 10% or less of its EU ETS emissions, the total EU ETS emissions will be assigned to the host sector.

3.22 Relevant emissions for GQ CHP schemes that commenced operation after 31 December 2003 are calculated using a benchmark. In line with the methodology set out above for schemes with historic data, and applying the same thresholds, only the Good Quality element of the scheme will be benchmarked for allocation from the GQ CHP sector, and the non-good quality elements of the installation will remain in the host sector (relevant emissions for this element may be calculated using historic emissions or a benchmark).

### **3.4 Allocation Methodology Rules**

3.23 Rules applied to tackle anomalies in emissions during the historic baseline period (e.g. governing special circumstances such as rationalisation of plant) in Phase I will also be applied in Phase II. These rules have been extended in Phase II to account for particular changes following the end of the 2000-2003 baseline period<sup>47</sup>.

3.24 These rules were developed following consultation on the Phase I NAP and consultation on Phase II allocation methodology during Summer 2005, which indicated that the standard approach for calculating relevant emissions was not appropriate in these situations.

3.25 Other amendments to the allocation methodology rules for Phase II were considered, including a rule to tackle administrative receivership and partial rationalisation, but the complexity of their application outweighed the evidence of the need for such rules.

3.26 The commissioning rule used in Phase I will not be applied in Phase II. The commissioning rule has been replaced in part by a “first year of operation” rule that will apply to all sectors. More details of all of the rules to be used for Phase II are set out below and in Appendix C.

3.27 All Phase II incumbents from all sectors are potentially eligible for these rules<sup>48</sup>, but they must have submitted verified applications for the rules. If the rules were applied in Phase I they will automatically continue to be applied in Phase II for incumbents (with the exception of the commissioning rule).

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<sup>47</sup> Detailed guidance on the implementation of these “Allocation Methodology rules” is available in the Detailed Guide to Phase II Allocation Methodology on the DTI website: <http://www.dti.gov.uk/energy/environment/euets/phase2/allocation/page27064.html>.

<sup>48</sup> LEP and GQ CHP incumbents that may fall into the definition of LEP are not eligible for rationalisation rules.

- 3.28 The rationale and the general impact of each rule on the allocation methodology are set out below. Appendix C contains more detailed information – including specific eligibility criteria for each rule and the methodology for calculating allocations after application of each rule.
- 3.29 **Changes during the baseline period rule:** This rule enables a step change in the pattern of emissions during the baseline period to be taken into account. This applies in situations such as where a technically distinct unit has been added to the installation in 2001 or later. In order to take account of the step change in emissions from such a case, the installation's relevant emissions are calculated on a unit by unit basis. Where disaggregated data is unavailable, data prior to the change is disregarded from the calculation of relevant emissions. The rule may also be applied in circumstances where operators are unable to exclude data relating to closures of units before the end of the 2000-2003 baseline. The reason for requiring historic data that excludes data relating to closed units is to ensure that all baseline data is representative of the operation of installations at the end of the 2000-2003 baseline period and to therefore treat all operators similarly.
- 3.30 **Changes after the baseline period rule:** This rule has been introduced in Phase II to enable increases in net capacity made at installations between 1 January 2004 and 30 June 2006 to be taken into account for all installations that commenced operation before 31 December 2003 (including those that are temporarily excluded during Phase I and those affected by Phase II expansion activities). The increase in net capacity is accounted for by adding a benchmark calculated for that net increase to the relevant emissions of the rest of the installation (its configuration at the end of 2003). The reasons for accounting for net increases in capacity in the methodology include:
- it accounts for the fact that operations at installations may have evolved since Phase I;
  - it recognises the lag time between the 2000-2003 baseline period and Phase II while maintaining the use of historic baseline data;
  - it emulates the approach to applying for allowances from the New Entrant Reserve during Phase I; and
  - the UK has decided not to take account of partial closure in Phase II. This rule cannot be applied to installations starting operation after 2003 because a benchmark based on the configuration at 30 June 2006 is used to determine their relevant emissions; this avoids double counting and reduces the administrative burden for such installations.
- 3.31 **Rationalisation during the baseline period rule:** This rule accounts for instances where an operator has permanently closed one (or more) installation(s) and transferred production to another installation within the EU ETS in order to achieve efficiency gains by raising the use of existing capacity at the installation(s) during the 2000-2003 baseline period. This rule enables the data prior to rationalisation to be disregarded in the calculation of relevant emissions in order to acknowledge the additional emissions arising at the receiving installation(s) as a result of

rationalisation during the baseline period. Installations that are classified in the LEP sector and GQ CHP installations that meet the criteria for inclusion in the LEP sector in Phase II<sup>49</sup> are not eligible to apply for this rule. The rationale for this includes:

- it is deemed important to create an incentive to retain capacity within the generation sector to support security of supply objectives. Fossil fuel powered generating plant approaching closure is most likely to be operated at times of high power demand and so is important for maintaining supply in these periods;
- at times of peak demand, other generating stations are likely to be producing at close to full capacity and so it is unlikely to be possible to transfer production at these times to other stations; and
- it is difficult to present objective evidence to determine whether reduced generation from one station has been compensated for by increased output at another specified station or at some combination of other stations.

3.32 Rationalisation **after** the baseline period rule<sup>50</sup>: This rule has been introduced in Phase II to extend the rationalisation during the baseline period rule to apply to rationalisation between 1 January 2004 and 30 June 2006. The reasons that operators may apply for rationalisation after 1 January 2004 to be taken into account include:

- it can account for the additional emissions arising at the receiving installation(s) as a result of rationalisation since the end of the 2000-2003 baseline period; and
- it emulates the approach to rationalisation under the New Entrant and Closures regime in Phase I.

Rationalisation after the baseline period is accounted for by using a benchmark based on the configuration of the entire receiving installation(s) at 30 June 2006 as that installation's relevant emissions.

3.33 Temporary closure **during** the baseline period rule: The Temporary closure rule applies where an entire installation, or a unit within an installation, has been closed and has not emitted CO<sub>2</sub> for at least one full calendar year (January – December) during the 2000-2003 baseline period. In the standard methodology any years with “zero” emissions are included in the calculation of relevant emissions. Therefore, this rule enables all years of temporary closure for an installation or unit to be marked as “blank” emissions (rather than “zero”) in order to be excluded from the calculation of relevant emissions.

3.34 First year of operation **during** the baseline period rule: This rule has been introduced in Phase II, partly to replace the Commissioning rule which operated during Phase I. It applies to all installations or units (in all sectors) that began operations during the 2000-2003 baseline period. It enables recognition that data for the first year of emissions often relates to operation for part of a year and therefore allows all installations to be

<sup>49</sup> According to the definition set out in Paragraph 2.6 in Section 2.

<sup>50</sup> LEP and GQ CHP installations that fall into the definition of LEP are not eligible for this rule for the same reasons as set out in 3.31.

treated similarly. Only the data for years following (i.e. excluding) the first year of operation for the installation or unit will be used in the calculation of relevant emissions. If disaggregated data for units is unavailable, and the FYO rule is to be applied to an addition representing the most recent change during the 2000-2003 baseline period, only historic data for the entire installation after the year in which that most recent addition was made is used for calculating relevant emissions.

### 3.5 Large Electricity Producers (LEP) benchmark

3.35 For Large Electricity Producers, the output of a benchmark formula will be used instead of the standard methodology to determine each installation's share of the total available allowances. The benchmark formula has been developed with the help of Ofgem<sup>51</sup> and in consultation with industry. As noted in paragraph 3.10 above, Phase I new entrants that are LEP incumbents in Phase II will receive an allocation based on the benchmark for Phase II new entrants.

3.36 For the purposes of the benchmark formulae the LEP installations will be classified into:

- gas-fired generators;
- coal-fired generators that have opted in to the Large Combustion Plants Directive (LCPD) by 3 February 2006;
- coal-fired generators that had opted out of the LCPD by 30 June 2004 and had not opted back in by 3 February 2006;
- non Good Quality CHP (GQ CHP) capacity at CHP plants;
- other.

3.37 The benchmark for each plant will be calculated according to:

- the individual plant's registered Transmission Entry Capacity (TEC) for 2008, as given in National Grid's Seven Year Statement 2006;
- multiplied by sub-sector standard load factor, derived from 2000-2003 historic data other than an adjusted case to reflect the limited running time allowed to plants which opt out of the LCPD;
- multiplied by sub-sector standard emissions factor, derived from efficiency factor \* fuel emissions factor.

#### *Capacity*

3.38 The listed TEC is the amount of generating capacity on which the power station pays Transmission Network Use of System (TNUoS) tariffs for a given year. TECs are constrained to be no greater than the site's Connection Entry Capacity (CEC), which is the maximum export limit that can be physically supported. The Government has chosen this definition of station capacity rather than, for example, the maximum physical/engineering capacity of a station, which can be variously assessed, for ease of verification; and because it is more likely to accurately reflect use.

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<sup>51</sup> Ofgem is the Office of Gas and Electricity Markets.



- 3.39 For those installations that fall under the LEP definition stated above, the proportion of non-Good Quality CHP for the installation will be determined using the average ratio of Qualifying Power Capacity to Total Power Capacity for 2001-2003 in order to be consistent with the approach that will be used for Good Quality CHP classified in other sectors.
- 3.40 In three specific cases, however, plants also export significant quantities of electricity to customers through private networks rather than through the National Transmission System, so that this generation (hence carbon production) is not reflected in its TEC. In these three cases only (Rocksavage (NAP ID 2787), Saltend (NAP ID 369) and Teesside (NAP ID 2924)) the benchmark uses Connection Entry Capacity (CEC) instead of TEC.
- 3.41 In the case of plant in Northern Ireland, where different market arrangements prevail, the capacity figures will be based on Connection Agreement Capacity and adjusted for plant which has been decommissioned, as provided by the Department of Enterprise, Trade and Investment for Northern Ireland (DETINI).

#### *Load Factor*

- 3.42 Load factor refers to the proportion of a plant's capacity that produces electricity each year. A load factor of 50% for a given year, for example, might mean either that the whole plant ran for 4380 hours that year (hours in one year = 8760), or that 50% of the plant's capacity ran for 8760 hours. This is a matter of commercial choice by plant owners and may depend on factors such as an individual plant's technical capabilities, overall electricity supply and demand at any one time, present and expected future prices of electricity, fuel and carbon allowances, environmental considerations, etc. As such it is not possible to state that one load factor is "better" than another, or to identify "best practice". The UK has therefore sought to identify representative average load factors for each sub-sector within the LEP.
- 3.43 With the exception of opted-out coal plants, the benchmark will use capacity weighted averages of individual historic load factors for the years 2000 - 2003. Plants considered for the category averages are based on the current status and not whether, for example, they had flue gas desulphurisation in the subject year.
- 3.44 In the case of opted-out coal plant, a different approach will be used to take into account the provisions of the LCPD. Opted-out plant is allowed to run only for 20,000 hours after the LCPD comes into force, after which and by the end of 2015 at the latest they have to close. In effect, therefore, owners of opted out coal plant have to make a commercial decision as to how they will use 20,000 operational hours over an eight-year period. Rather than attempt to second-guess that

decision, which as stated above is likely to be different in each case and will be influenced by a number of variables and assumptions, the benchmark will use a load factor based on a simple division of 20,000 hours equally between eight years (= 2500 hours/year) from which a load factor of 28.54% (2500/8760) is derived.

3.45 A similar load factor is also used pro-rata in the case of Ballylumford in Northern Ireland (NAP ID 383), which is mainly combined cycle gas turbine (CCGT) but where part of the plant's total capacity, which runs on heavy fuel oil for part of the time, is opted-out.

3.46 It is recognised that not all plant will choose to spread its allowance of hours equally in this way and that it is not required to do so under the LCPD. In theory it would be possible for an opted-out plant to achieve a higher load factor over the five years of Phase II, as some have done in previous years. However, it cannot reasonably be assumed that all opted-out plant will do so. Furthermore, there is an equity issue; other sectors are being treated on the basis of averages rather than on the highest theoretically possible load factors.

#### *Emissions factors*

3.47 The category-specific emission factors of electricity produced (tCO<sub>2</sub>/MWh) are determined from technology average gross thermal efficiencies and fuel emission factors (gross energy based).

3.48 Tables 3.1 and 3.2 show efficiencies, fuel emission factors and the resulting emission factors for all sub-sectors. Fuel emission factors are obtained from the UK Greenhouse Gas National Inventory Report (2005)<sup>52</sup>. Thermal electrical efficiencies are consistent with those used in the Updated Energy Projections. No differentiation is made between opted-in and opted-out plant for these purposes.

**Table 3.1:** *Coal and oil plant efficiencies, fuel emissions factors and resulting emissions factors*

	<b>Coal</b>	<b>Oil</b>
Efficiency	0.35	0.32
Calorific value GJ/t	26.1	43.6
Fuel use t/TWh	0.394	0.258
Carbon content tC/Mt	0.627	0.879
Emission factor carbon tC/MWh	0.2471	0.23
Emission factor carbon dioxide tCO <sub>2</sub> /MWh	0.91	0.83

<sup>52</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/permits/download/emission-factors-dec05.xls>.

**Table 3.2:** Gas plant efficiencies, fuel emissions factors and resulting emissions factors

Efficiency	0.468
Calorific value (MJ/cubic metre)	39.5
Fuel use J/TWh	7.692
Carbon content tC/TJ	14.03
Emission factor carbon tC/MWh	0.11
Emission factor carbon dioxide t/CO <sub>2</sub> /MWh	0.4

### 3.6 Treatment of Phase I new entrants starting operation between 1 July 2006 and 31 December 2007

3.49 New entrants that start towards the end of Phase I (i.e. between 1 July 2006 and 31 December 2007) will not be included in the NAP as incumbents because their new entrant activity will commence after submission of the NAP to the Commission. 8.5 million allowances have been earmarked in the New Entrant Reserve for this type of new entrant (see Section 1 paragraph 1.15). Details of how these allowances will be allocated to installations can be found in Section I of Appendix D.

*If historical emissions data were used, please state whether they have been determined in accordance with the Commission's monitoring and reporting guidelines pursuant to Article 14 of the Directive or any other set of established guidelines, and/or whether they have been subject to independent verification.*

3.50 Historic emissions data submitted for the development of the NAP are required to be collected and calculated in accordance with several established guidelines including the Commission's *EU ETS Monitoring and Reporting Guidelines*, the *Guidelines for the Measurement and Reporting of Emissions by Direct Participants in the UK Emissions Trading Scheme*, the *Climate Change Agreement Guidance on Monitoring Data: Performance Data and Auditing for the First Milestone* and some industry best practice protocols. Basic checks indicate that these guidelines give rise to comparable emissions data when using emission factors for UK fuels.

3.51 The UK has developed a system for independently verifying historic emissions data used for allocations to ensure that they have been appropriately collected and calculated, and are free from material errors and misstatements.

3.52 Installations included in the Phase II NAP have been required to obtain independent verification of their historical baseline emissions data by an accredited verifier. To promote good quality and consistent baseline data verifications, the verifiers are accredited by the UK Accreditation

Service in accordance with their updated CIS 5 Guidance for the Application of ISO/IEC Guide 65 Document. All verification has been carried out by accredited verifiers in accordance with *Guidance Note 2 – Guidance on baseline data verification*<sup>53</sup>.

3.53 The UK may make a correction to its national allocation plan table to provide for a reduced allocation to an installation in order to compensate for an earlier over-allocation which has occurred as a result of the installation providing false or misleading information.

*If early action or clean technology were taken into account at this level, please state so here and give details in Sections 4.2 and/or 4.3 below.*

3.54 Please see sections 4.2 on early action and 4.3 on clean technology.

*If the Member State intends to include unilaterally installations carrying out activities listed in Annex I below the capacity limits referred to in that Annex, please explain why, and address, in particular, the effects on the internal market, potential distortions of competition and the environmental integrity of the scheme.*

3.55 The UK does not propose to unilaterally include installations carrying out activities listed in Annex I below the capacity limits referred to in Annex I as provided for in Article 24 of the Directive.

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<sup>53</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/info/guidance.htm>

## 4. TECHNICAL ASPECTS

### 4.1 Potential, including technological potential

*Has criterion (3) been used to determine only the total quantity of allowances, or also the distribution of allowances between activities covered by the scheme?*

*Please describe the methodology (including major assumptions made) and any sources used to assess the potential of activities to reduce emissions. What are the results obtained? How is it ensured that the total quantity of allowances allocated is consistent with the potential?*

*Please explain the method or formula(e) used to determine the quantity of allowances to allocate at the total level and/or activity level taking the potential of activities to reduce emissions into account.*

4.1 The potential, including the technological potential of sectors to reduce their emissions is taken into account in the projections of emissions from sectors. The modelling approach used takes account of the differing levels of cost-effective abatement that could be achieved in each sector. The Government commissioned consultants<sup>54</sup> to evaluate the potential, including the technological potential to abate for industrial sectors and the projected emissions incorporate the results of this report. Further information is included at Appendix B.

*If benchmarking was used as a basis for determining the intended allocation to individual installations, please explain the type of benchmark used, and the formula(e) used to arrive at the intended allocation in relation to the benchmark. What benchmark was chosen, and why is it considered to be the best estimate to incorporate achievable progress? Why is the output forecast used considered to be the most likely development?*

4.2 The LEP sector will be subject to a benchmarking methodology in Phase II. This is set out in Section 3.

4.3 In Phase II, allocations to New Entrants and incumbent installations that commenced operation during or after 2004 will be based on benchmarks. Standardised benchmarks for use in Phase II seek to take account of best practice and have been revised from those used in Phase I. The new entrant benchmarks adopt natural gas as the standard energy carrier except for where the technical characteristics of an industrial process rules out its use. This should encourage investment in clean technology and energy efficiency. The standardised benchmark methodology developed for New Entrants and incumbent installations that commence operation during or after 2004 is set out and explained in

<sup>54</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/pdf/abate-opportunity.pdf>

Appendix D. The spreadsheet used for calculating these benchmarks is at Annex D1.

## 4.2 Early action

*If early action has been taken into account in the allocation to individual installations, please describe in which manner it is accommodated. Please list and explain in detail the measures that were accepted as early action and what the criteria accepting them were. Please demonstrate that the investments/actions accommodated led to a reduction of covered emissions beyond what followed Community or national legislation in force at the time the action was taken.*

- 4.4 Criterion (7) of Annex III of the Directive gives Member States discretion about whether or not to take early action into account. The UK considers that it is very difficult to identify instances of early action other than those undertaken either;
- in compliance with relevant legislation or other policies, which the Commission guidance makes clear is not covered by the definition of early action; or
  - for economic reasons, for which there would appear to be little justification for additional award.
- 4.5 Therefore the UK does not consider that it is appropriate to reward early action specifically in the Phase II NAP.
- 4.6 However, the use of average emissions data from 2000-2003 to distribute allowances to individual installations (see Section 3) takes some account of major decreases in emissions during later years by incorporating data for early years, and therefore rewards an operator who took early action during the baseline period. It also avoids the penalty for early action that would result from basing allocations on a single recent year (e.g. 2003) or on individual forecasts of emissions.
- 4.7 Furthermore, the approach to rationalisation during and after the baseline period set out in Section 3 ensures that operators that have taken early action by rationalising production are not penalised.

## 4.3 Clean technology

*How has clean technology, including energy efficient technologies, been taken into account in the allocation process? If at all, which clean technology has been taken into account, and on what basis does it qualify as such? Have any energy production technologies intended to be taken into account been in receipt of approved State aid for environmental protection in any Member State? Please state whether any other industrial technologies intended to be taken into account constitute “best available techniques” as defined in Council Directive 96/61EC, and explain in what way it is particularly performing in limiting emissions of covered greenhouse gases.*

- 4.8 The UK considers that one of the principal effects of establishing the EU ETS will be to provide an incentive for clean, energy efficient technologies by establishing a price for carbon emissions. Some elements of the allocation process to existing and new entrant installations allows preferential treatment for operators who have taken action to invest in clean technology, as described below.
- 4.9 Increasing use of clean sources of fuel, such as biomass or waste material, is incentivised through the trading scheme to the extent that clean fuel implies lower emissions than otherwise. Therefore greater future use of clean fuels could leave an operator with surplus allowances to sell. New investment in clean fuel plants is also strongly incentivised as the benchmarks used to derive new entrant allocations are based on the assumption that gas is being used.

#### *4.3.1 Good Quality Combined Heat and Power*

- 4.10 The UK Phase II NAP recognises the environmental benefit of the use of GQ CHP. The starting point for the policy is the UK's target for 10GW of installed GQ CHP capacity by 2010 within the context of the Climate Change Programme. The UK NAP includes a number of measures intended to provide a strong incentive to invest in this kind of clean technology.
- 4.11 Sections 2, 3 and Appendix D provide more details of UK CHP policy. In summary, the following measures have been proposed to recognise GQ CHP:
- a separate sector has been created for GQ CHP. This should ensure that the projected growth in CHP over the Phase is recognised accurately and transparently;
  - GQ CHP new entrants will receive favourable treatment in order to incentivise new investment in this type of clean technology;
  - the continued operation of a reserve of free allowances for GQ CHP new entrants should secure the incentive for new investment in GQ CHP;
  - Increases in GQ CHP will continue to be eligible for allowances from the new entrant reserve, and conversion of existing equipment into GQ CHP will also be eligible for new entrant reserve allowances.

#### *4.3.2 Carbon Capture and Storage*

- 4.12 The UK Government is proposing to recognise Carbon Capture and Storage (CCS) for Phase II of the EU ETS and is working closely with the Commission and other Member States to work towards securing its inclusion as soon as possible.

## 5. COMMUNITY LEGISLATION AND POLICY

### 5.1 Treatment of new entrants (Internal Market Policy)

*How will new entrants be able to begin participating in the EU emissions trading scheme?*

*In the case that there will be a reserve for new entrants, how has the total quantity of allowances to set aside been determined and on what basis will the quantity of allowances be determined for each new entrant? How does the formula to be applied to new entrants compare to the formula applied to incumbents of the relevant activity? Please also explain what will happen to any allowances remaining in the reserve at the end of the trading period. What will apply in case the demand for allowances from the reserve exceeds the available quantity of allowances?*

*Is information already available on the number of new entrants to expect (through applications for purchase of land, construction permits, other environmental permits etc.)? Have new or updated greenhouse gas emission permits been granted to operators whose installations are still under construction, but whose intention it is to start a relevant activity during the period 2007 to 2012?*

- 5.1 The UK has decided to set aside a number of allowances in a new entrant reserve (NER) to be allocated free to installations which commence or extend the operation of an Annex I activity between 1 January 2008 and 31 December 2012.
- 5.2 The NER will comprise 81,601,251 million allowances, representing 6.6% of the total number of allowances to be allocated for Phase II<sup>55</sup> (see Section 1). 8.5 million of the allowances in the NER will be used to provide Phase II allowances for later Phase I new entrants (that is, new entrants that start between 30 June 2006 and 31 December 2007, including some GQ CHPs). 27.5 million allowances will be earmarked for GQ CHP new entrants and 2.4 million allowances will form a contingency fund.
- 5.3 Further details of how the NER will operate and how the total quantity of allowances to be set aside has been determined can be found in Appendix D.

<sup>55</sup> The NER represents 6.6% of the total number of allowances prior to the deduction of allowances to be auctioned and 7.1% of the allowances to be allocated for free (see Appendix D)



## 5.2 Community legislative and policy instruments considered

*Please list other Community legislation or policy instruments that were considered in the establishment of the National Allocation Plan and explain how each one has influenced the intended allocation and for which activities.*

5.4 The energy projections which form the basis for determining the total quantity of allowances and the distribution of those allowances at sectoral level (see Sections 1 and 2 above) incorporate the impact of a wide variety of Community and domestic legislation and policy instruments. Table 5.1 below sets out an indicative list of Community instruments that are taken into account in these projections, together with a brief summary of their effect on emissions.

**Table 5.1: Community Legislative and Policy Instruments Considered**

<b>Legislative or policy instrument</b>	<b>Impact on emissions</b>
Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations	Requires certain installations using organic solvents to take steps to reduce emissions of volatile organic compounds to air. Encourages the more efficient, and hence more energy efficient, use of solvents.
Directive 1999/30/EC relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air.	The need to comply with limit values can reduce the emissions of these pollutants from combustion sources, which limits the use of combustion sources and their associated CO <sub>2</sub> emissions.
Directive 1999/32/EC relating to the reduction of the sulphur content of certain liquids fuels and amending Directive 93/12/EEC	Requires petrol and diesel fuels to comply with tighter requirements regarding sulphur levels, thereby increasing CO <sub>2</sub> emissions from refineries.
Directive 2000/76/EC on the incineration of waste	Prescribes stringent operating requirements for incinerators from 2005, which will have an indirect impact on emissions of greenhouse gases.
Directive 2001/77/EC on the promotion of electricity produced from renewable energy sources in the internal electricity market	Promotes an increase in the contribution of renewable energy sources to electricity production, thereby reducing emissions from combustion of fossil fuels for electricity production.

<b>Legislative or policy instrument</b>	<b>Impact on emissions</b>
Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants	From 2008, limits emissions of sulphur dioxide, oxides of nitrogen and dust from combustion plants with a net rated thermal input of $\geq 50$ MW. Effect on CO <sub>2</sub> emissions: may have marginal impact in encouraging use of abatement systems such as Flue Gas Desulphurisation and Selective Catalytic Reduction which would allow higher coal-burn giving rise to increases in CO <sub>2</sub> emissions. May also result in lower running hours reducing CO <sub>2</sub> emissions.
Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants	Sets national emission ceilings for pollutants causing acidification and eutrophication and for ozone precursors. Effect on emissions of CO <sub>2</sub> limits the emissions of sulphur dioxide and nitrogen oxides from combustion sources, which limits the use of combustion sources and their associated CO <sub>2</sub> emissions.
Directive 2001/91/EC on the energy performance of buildings	Sets minimum requirements for the energy performance of all new buildings and existing large buildings subject to major renovation and provides for energy certification of all buildings.
Directive 2003/17/EC relating to the quality of petrol and diesel fuels	Requires the production of sulphur-free liquid fuels during 2005-2009.
Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport	Requires Member States to set targets for biofuel sales for 2005 and 2010
Directive 2003/96/EC on the restructuring of the Community framework for the taxation of energy products and electricity	Widens the scope of the EU's minimum rate system for energy products, previously limited to mineral oils, to all energy products.
Directive 96/61/EC concerning Integrated Pollution Prevention and Control	Requires installation-specific emission limit values on greenhouse gases where these are likely to be emitted in significant quantities. Also requires efficient use of energy by installations.
Directive 96/92/EC on ambient air quality assessment and management	Establishes a framework for the protection of public health and the environment from a range of air pollutants, particularly sulphur dioxide, nitrogen dioxide and oxides of nitrogen, and particulate matter from combustion sources.
Voluntary agreements with motor manufacturers on fuel efficiency of new cars	Commits the automotive industry to improving average new car fuel efficiency to 140 g/km CO <sub>2</sub> by 2008/9 (a 25% improvement on the 1995 level).

*Has any particular new Community legislation been considered to lead to an unavoidable decrease or increase in emissions? If yes, please explain why the change in emissions is considered to be unavoidable, and how this has been taken into account.*

5.5 See Table 5.1 above.

## 6. PUBLIC CONSULTATION

*How is this national allocation plan made available to the public for comments?*

- 6.1 The UK has consulted industry and other stakeholders throughout the development of the National Allocation Plan.
- 6.2 On 31 March 2005, the Government published an informal communication paper outlining the general approach to Phase II, and invited views on a range of issues relating to the potential shape and scope of the Scheme. A summary of responses has been published on the Defra website<sup>56</sup>.
- 6.3 On 19 July 2005, the Government launched a preliminary formal consultation detailing its intended approach to Phase II, seeking information and stakeholder views on a number of issues including the use of auctioning and project credits, expansion options and the New Entrant Reserve. A programme of focused stakeholder events was held to ensure that this consultation was as effective as possible. A report on the consultation has been published on the Defra website<sup>57</sup>.
- 6.4 On 16 February 2006, DTI launched a consultation on the emissions projections that inform the allocation to sectors covered by the EU ETS. The consultation process was supplemented by stakeholder events in order to increase transparency about the methodology that has been used to forecast emissions. A report on the consultation has been published on the DTI website<sup>58</sup>.
- 6.5 On 22 March 2006, DTI launched a consultation to review the New Entrant Benchmarks for Phase II. The Benchmarks, or standard factors, will be used to calculate allocations for Phase II new entrants and some incumbent installations (the final benchmark spreadsheet is at Annex D1). The consultation process was supplemented by a stakeholder event and reports detailing the finalised benchmarks for each sector (incorporating stakeholder comments) are available on the DTI website<sup>59</sup>.
- 6.6 The Draft UK Phase II National Allocation Plan was published for formal consultation on 28 March 2006. The consultation process was supplemented by stakeholder events and a report of the consultation is available from the Defra website<sup>60</sup>.

<sup>56</sup> See <http://www.defra.gov.uk/corporate/consult/euets-phasetwo/appendixa.pdf>.

<sup>57</sup> See: <http://www.defra.gov.uk/corporate/consult/euets-phasetwo/index.htm>

<sup>58</sup> See: <http://www.dti.gov.uk/consultations/page24621.html> and <http://www.dti.gov.uk/files/file33219.pdf>

<sup>59</sup> See: <http://www.dti.gov.uk/energy/environment/euets/phase2/new-entrants/benchmarks-review/page29366.html>

<sup>60</sup> See: <http://www.defra.gov.uk/corporate/consult/euets-phasetwo-nap/index.htm>

- 6.7 On 17 July 2006, a consultation on the treatment of certain small emitters was launched. The responses from this consultation have been considered in the drafting of the NAP and Government's response to the consultation is available on the Defra website<sup>61</sup>.
- 6.8 On 21 August 2006, a consultation was launched providing operators with an opportunity to comment on any errors that may be contained in the data and information used to calculate the installation-level allocations published alongside the Phase II NAP which was submitted to the Commission. Government's response to the consultation has been published on the Defra website<sup>62</sup>.
- 6.9 In addition to the formal consultation process, industry have been kept informed of developments through regular meetings with the Emissions Trading Group (ETG), in which all large industrial EU ETS sectors are represented. The Government also meets regularly with key environmental non-governmental organisations and other interested parties. The Phase II pages of the Defra website are regularly updated with information regarding current consultancy contracts that have been let and announcements regarding policy developments<sup>63</sup>.

*How does the Member State provide for due account to be taken of any comments received before a decision on the allocation of allowances is taken?*

- 6.10 The Government commissioned independent consultants to analyse responses to many of the consultations outlined above, with the consultancy reports informing the development of policy options. Government's responses to the consultations have been published on the websites listed above.
- 6.11 Operators will have had the opportunity to comment on two indicative lists of installation-level allocations prior to the final allocation decision. Comments and corrections following these consultations will be taken into account in making the final allocation decision.

*If any comments from the public received during the first round of consultation have had significant influence on the national allocation plan, the Member State should summarise those comments and explain how they have been taken into account?*

- 6.12 The Government's responses to the draft NAP consultation and consultation on the installation level allocations are available on the Defra website<sup>64</sup>.

<sup>61</sup> See: <http://www.defra.gov.uk/corporate/consult/euets-smallemitters/>

<sup>62</sup> See: <http://www.defra.gov.uk/corporate/consult/euets-phase2-install2/index.htm>

<sup>63</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/index.htm>

<sup>64</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/index.htm>

## **7. CRITERIA OTHER THAN THOSE IN ANNEX III TO THE DIRECTIVE**

*Have any criteria other than those listed in Annex III to the Directive been applied for the establishment of the notified National Allocation Plan? If yes, please specify which ones and how they have been implemented. Please also justify why any such criteria are not considered to be discriminatory.*

7.1 No other criteria have been applied.

## **8. BETTER REGULATION AND SIMPLIFICATION MEASURES**

### **8.1 General**

8.1 The EU ETS forms an integral part of the UK and EU's strategy to tackle the challenges posed by climate change and aims to reduce greenhouse gas emissions at least cost to industry. UK participation is a legal requirement, as set out in European Directive 2003/87/EC<sup>65</sup>.

8.2 In developing the Phase II NAP, the UK's key objectives have been to address anomalies and competitive distortions within the UK and achieve improved harmonisation with other Member States. The UK has sought to take a pragmatic approach to expansion, including major sources of CO<sub>2</sub> whilst ensuring that small emitters are not brought in to the Scheme unnecessarily. The UK has, wherever possible, streamlined the existing Scheme and simplified the methods of distributing allowances to both existing and new installations. 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. Learning lessons from Phase I we are:

- using a similar data baseline to Phase I, reducing the burden by not requiring all operators to provide additional data;
- including emissions from additional activities in the glass sector to reduce the current need for complex sub-metering at glass installations;
- introducing a de minimis rule under which certain small emitters choose whether to remain in the scheme in Phase II (see section 8.2 below); and
- in line with the Commission's guidance, taking a narrower interpretation of the definition for ceramic installations than was applied in Phase I (see section 8.3);

8.3 In addition, regulators and Government have made representations to the Commission to reduce monitoring, reporting and verification requirements for smaller installations in Phase II. Revisions to these requirements will appear in the updated Monitoring and Reporting Guidelines. We are also contributing to an EU-wide project to develop more effective and automated reporting to simplify the process and reduce administration time.

8.4 The UK has considered a number of complex policy options and is satisfied that these will not result in additional complexity for existing operators in terms of compliance. Where complexity has been introduced, this has been at the request of industry in order to recognise

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<sup>65</sup> See: <http://www.defra.gov.uk/environment/climatechange/trading/eu/info/directive.htm#directive>

special circumstances and to allow them flexibility in complying with the requirements of the Scheme. Where there have been requirements additional to those in the Directive, these are, as far as possible, optional (in that operators can choose for themselves whether to take advantage). The options reflect Government's consideration of the most appropriate methods to distribute allowances (which are high value financial assets) in the most equitable way.

- 8.5 The Regulatory Impact Assessments (RIAs) outline the impact analysis for key options including those on auctioning, expansion of scope, use of project credits, allocation methodology and new entrants and closure policy. Stakeholder responses to the consultation on the draft NAP, and the Commission's review of the Scheme have contributed to this process.

## **8.2 De Minimis Threshold**

- 8.6 The treatment of small combustion installations has been a matter of concern under Phase I given the disproportionate costs of inclusion within the scheme in relation to their actual emissions. Responses to consultation highlighted that further measures should be put in place in order to exclude certain small installations from Phase II.
- 8.7 The Directive requires that all combustion installations with an installed capacity greater than 20MW must be included within the Scheme. It further states that in order to determine whether this threshold is met, the capacity of each individual combustion unit on a site should be added together to determine whether it exceeds the 20MW threshold in the Directive<sup>66</sup>. If the threshold is met, then all such units are covered by the scheme.
- 8.8 This could be interpreted to include every 'combustion activity' within the aggregation calculation down to small, fuel-burning wet-back burners and rarely used emergency back-up units. This leads to some sites entering the scheme when they have, for example, 8 units below 3MW. This places significant administrative, monitoring, reporting and verification burdens on such sites, which account for a very small proportion of emissions.
- 8.9 In order to address these concerns, the UK Government will exclude certain small installations through the introduction of a voluntary de minimis threshold of 3MW in Phase II. Combustion units (installations) less than 3MW would be excluded from the calculation of the aggregation rule. Combustion units 3MW or above would be included in the calculation. Should the aggregated units still exceed 20MW, all units would be included.

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<sup>66</sup> Annex 1 of Directive 2003/87/EC states: "The threshold values given below generally refer to production capacities or outputs. Where one operator carries out several activities falling under the same subheading in the same installation or on the same site, the capacities of such activities are added together." ... "Combustion installations with a rated thermal input exceeding 20MW".



8.10 The de minimis threshold is voluntary – installations may choose to remain in the scheme<sup>67</sup>.

8.11 The allocations, which would have been allocated to any installation which does not choose to remain in the scheme, will not be allocated, and the total quantity of allowances allocated will be reduced accordingly.

8.12 Operators should also note that *Guidance Note 1: Guidance on Inclusion*<sup>68</sup> states:

“stand-by generation or boiler capacity should be included in the aggregation for a combustion installation calculation provided that it is technically feasible for the stand-by generators or boilers to be run concurrently with the main generators or boilers on site. If all the capacity cannot physically be operated at the same time, then the thermal input of the combustion installation should be calculated by aggregating the rated thermal input of all generators/boilers on site (operated by the same operator) that can be run concurrently.”

### 8.3 Interpretation of the ceramics definition

8.13 Annex 1 of the EU ETS Directive defines the categories of activities to be included. For ceramics, it states:

“Installations for the manufacture of ceramic products by firing, in particular roofing tiles, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, and/or with a kiln capacity exceeding 4m<sup>3</sup> and with a setting density per kiln exceeding 300kg/m<sup>3</sup>.”

8.14 In Phase II, the UK Government will interpret this provision so as to require the simultaneous presence of all sub-elements. Installations that do not meet the requirements will not be included in Phase II of the scheme and allowances which would have been allocated to any installation that is excluded for this reason will not be allocated, and the total quantity of allowances allocated will be reduced accordingly.

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<sup>67</sup> Further information is available at: <http://www.defra.gov.uk/corporate/consult/euets-smallemitters/>

<sup>68</sup> See section 2.8 of Guidance Note 1 available from: <http://www.defra.gov.uk/environment/climatechange/trading/eu/info/guidance.htm>