EU EMISSIONS TRADING SCHEME PHASE II (2008-2012)

JOINT IMPLEMENTATION AND CLEAN DEVELOPMENT MECHANISM CREDITS

FULL REGULATORY IMPACT ASSESSMENT
FEBRUARY 2007

1. TITLE OF PROPOSAL

1.1 This Regulatory Impact Assessment (RIA) concerns the options for setting quantitative and/or qualitative limits on the use of Kyoto project credits by operators in the second phase of the EU Emissions Trading Scheme (EU ETS), in accordance with the requirements of the EU Linking Directive[1].

1.2 The general approach to the second phase of the EU ETS is described in the accompanying overarching RIA.

2. PURPOSE AND INTENDED EFFECT

2.1 Objective

2.1.1 The Government's main aims for Phase II are to:

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

Please see the overarching RIA for a full discussions of the aims and objectives of the Scheme.

2.1.2 The broad objective of the EU ETS is to reduce greenhouse gas emissions from installations and activities covered by the Scheme at least cost in order to meet obligations under the Kyoto protocol. Each operator is allocated a level of allowances and they can trade, by buying allowances if they emit more, and selling allowances if they emit less, so that at the end of the compliance period, they surrender enough allowances to cover their emissions in that period. The EU Linking Directive amends the ETS Directive (2003/87/EC) to allow operators to use emission reduction credits from Joint Implementation (JI) or Clean Development Mechanism (CDM) projects[2] to comply with their obligations under the Scheme.

2.1.3 The rationale at a global level for allowing the use of project credits is that, as greenhouse gas emissions contribute to global climate change regardless of the source, it is necessary to control greenhouse gas emissions at a global level. The Kyoto project credits address this by encouraging the reduction of emissions at the lowest cost location. The flexible mechanisms aim to facilitate technology transfer to developing countries and sustainable development in those countries.

[1] Directive 2004/101/EC of the European Parliament and of the Council, amending Directive 2003/87/EC, in respect of the Kyoto Protocol's project mechanisms. Available from: http://europa.eu.int/eur-lex/lex/LexUriServ/site/en/oj/2004/l_338/l_33820041113en00180023.pdf.

[2] For more on JI and CDM please refer to the Defra website: http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/index.htm

2.1.4 The Government has considered options to provide for the most appropriate use of Kyoto credits from JI and CDM projects by UK operators in Phase II of the Scheme.

2.1.5 The overall objective for the use of Kyoto credits in the EU ETS is to help operators meet their obligations in a cheap and flexible way possible. The Linking Directive requires a quantitative limit to be set and allows for a qualitative limit to be set for the use of these credits by operators in Phase II. The Government has been considering the following criteria in assessing the level and type of the limit:

- Ensuring that the environmental benefits of the Scheme are maintained;
- Considering the impact on compliance costs for UK firms. Allowing the use of project credits enables greenhouse gas emission reductions from the lowest cost location, which should reduce the compliance cost for firms
- Consideration of how other EU Member States set their limits in order to maintain the competitive position of UK firms;
- Ensuring that the limit complies with the principle of 'supplementarity' (which is discussed further in paragraph 2.2.13);
- Consideration of the wider benefits of the flexible mechanisms in a global context, in that they facilitate technology transfer to and sustainable development in developing countries.

2.2 Background

2.2.1 For additional background on climate change issues and Phase II please see the overarching Phase II RIA.

Simplification and better regulation

2.2.2 The Government considers EU ETS measures in a way that is consistent with the principles of better regulation and looks to achieve its objectives with the minimum additional regulatory burden, taking on board the work of the Better Regulation Commission (previously the Better Regulation Task Force). Offsetting simplification measures have been considered throughout the development of policy options.

2.2.3 In particular, it is recommended that no qualitative limit is imposed partly due to the complications involved for operators and government in enforcing this. We are also proposing an option to set a limit at installation level rather than national level as this will give smaller installations the opportunity of reducing compliance costs. There are also practical difficulties in applying a limit at a national level as there would be a lack of transparency on when the limit had been reached.

The Kyoto Protocol and mechanisms[3]

2.2.4 Most EU countries have binding Kyoto targets. Under the Kyoto protocol, the EU has agreed to an 8% reduction from 1990 emissions and the UK to reduce Greenhouse Gas emissions by 12.5% as part of the burden sharing agreement.

Flexible Mechanisms[4]

2.2.5 The Kyoto Protocol also provides for flexible mechanisms that are intended to help Governments and industry achieve emissions reductions - at least cost. The mechanisms include international emissions trading (IET)[5], two project-based mechanisms, known as Joint Implementation (JI)[6] and the Clean Development Mechanism (CDM)[7].

Joint Implementation

2.2.6 Joint Implementation (JI) is a project-based mechanism carried out between two countries with Kyoto commitments and hence tradable Kyoto allowances, called Assigned Amount Units (AAUs). One country can carry out a project to reduce the emissions of a second country, called the host country. The reductions can then be quantified (compared to a business-as-usual scenario) and an appropriate amount of credits transferred from the host country to the sponsor in the form of emission reduction units (ERUs). In this situation the sponsor country gets extra allowances, allowing them to increase their domestic emissions, while the project will result in a reduction in emissions in the host country by an amount equal to the allowances transferred, so the loss of the allowance is unlikely to make it either significantly easier or harder for the host to meet their commitment. ERUs may only be issued when the assigned amount is established and will therefore be available in Phase II of the EU ETS (2008-12), which coincides with the first Kyoto commitment period. Verification of ERUs generated by JI projects is overseen either by the host country according to its own procedures where it complies with certain eligibility criteria, or by a Supervisory Committee where the host country does not meet the eligibility criteria.

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[3] For more on the Kyoto Protocol and mechanisms please see paragraphs 2.2.5-2.2.7 of the Linking Directive RIA available from:
http://www.opsi.gov.uk/si/em2005/uksiem_20052903_en.pdf

[4] For more on Flexible Mechanisms see paragraphs 2.2.8-2.2.12 of the Linking Directive RIA:
http://www.opsi.gov.uk/si/em2005/uksiem_20052903_en.pdf

[5] Article 17 of the Kyoto Protocol. International emissions trading (IET) provides Annex 1 Parties to acquire units from other Annex 1 Parties and use them towards meeting their emissions targets under the Kyoto Protocol. This does not directly relate to this RIA on domestic policy on project credits . For further information on IET please see:
http://unfccc.int/kyoto_mechanisms/emissions_trading/items/3016.php.

[6] Article 6 of the Kyoto Protocol.

[7] Article 12 of the Kyoto Protocol.

Example of a JI project

The upgrade of a cardboard plant at Nikopol in Bulgaria will reduce emissions of CO_2e (carbon dioxide equivalent) by incorporating multicomponent energy efficiency measures and a change to a greener fuel source. These measures are being implemented from 2004-8, and over the period 2008-12 an estimated savings of 372,539tCO_2e will be made, thereby generating a similar number of ERUs. This will provide the multinational paper company that owns the plant with a low cost option for compliance with the EU ETS, while generating cost savings at the plant itself. Bulgaria will transfer ERUs to the sponsor country. Its AAUs will therefore be reduced by the amount of the transfer. The sponsor's ERUs will be converted to AAUs increasing its country's 'cap' on emissions.

The Clean Development Mechanism

2.2.7 The Clean Development Mechanism (CDM) is similar to JI except that the host country does not have a Kyoto commitment and hence does not have allowances to transfer. Credits (certified emission reductions, CERs) can be generated by reducing emissions relative to a monitored baseline (business-as-usual scenario). Once generated, the CERs can be transferred to the sponsoring country, to be used for compliance with their Kyoto commitment. The CDM is the only part of the Kyoto Protocol to incentivise mitigation activities in developing countries, who see it as a useful way of contributing to their sustainable development and gaining access to investment and more advanced technologies. The Stern Review[8] explores the benefits of mechanisms which support low-carbon investment in developing countries. CDM credits can be forwarded to the UK registry and traded between accounts there once the International Transaction Log is in place. CERs differ from ERUs in that they are 'bankable' between Phase I and Phase II of the EU ETS i.e. CERs received in Phase I can be used for compliance purposes in Phase I whereas ERUs cannot be issued until Phase II. The UN has set up an Executive Board to supervise the CDM.

[8] http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm

Example of a CDM project in Onsan, Republic of Korea (N_2O emissions reduction)

A multinational chemical company owns a plant in South Korea that manufactures the second stage of adipic acid production. Currently, the waste gas stream from the adipic acid unit goes through a treatment process to recover the nitrogen oxides (NOx). The project activity consists of the installation of a dedicated facility to convert at high temperature the nitrous oxide into nitrogen based on the process of thermal decomposition. A boiler which generates steam with the high-temperature flue gas coming from the thermal oxidizer will also be installed. The installation of the decomposition facility will enable N_2O emissions to be avoided, which would in the absence of the project activity have been vented to the atmosphere. The project has a total estimated reduction of 64,050,000 tonnes of CO2e.

2.2.8 Thus far approved projects are dominated by a few large players and are primarily non-CO_2 projects (partly due to methodological issues concerning additionality[9]) although projects further back along the pipeline are being developed by a diverse range of developers and organisations As of January 2007, more than 1450 projects are in the global CDM project pipeline which between them are expected to deliver more than 1.8 billion CERs by 2012. 492 of these projects have been registered by the Executive Board, of which 123 have had CERs issued[10]. Over 30%of registered projects have UK participation. Of UK approved projects, over 90 % are non-CO_2 of which 21% are N2O and 55% are HFC.

2.2.9 For a more detailed overview of climate change projects and using the Kyoto flexible mechanisms, please refer to the guides available on the Climate Change Projects Office website: http://www.dti.gov.uk/sectors/ccpo/guides/page20683.html. Further information is available on CDM and JI project approval available on the Defra website: http://www.defra.gov.uk/environment/climatechange/internat/kyotomech/index.htm.

The Linking Directive

2.2.10 Directive 2004/101/EC (the "Linking Directive") was agreed on 27 October 2004 and published in the Official Journal on 13 November 2004. It amends Directive 2003/87/EC (establishing a scheme for greenhouse gas

[9] This relates to the requirement that CDM projects "lead to reductions in emissions that are in addition to any that would occur in the absence of the project activity".
[10] Please see http://cdm.unfccc.int/Projects/registered.html and http://cdm.unfccc.int/Issuance/cers_iss.html for details on registered projects and issuance of CERs, and http://cdm.unfccc.int/Projects/pac/howto/CDMProjectActivity/Validate for further information on the project approval process.

emission allowance trading within the Community) in respect of the Kyoto Protocol's project mechanisms. The Linking Directive was transposed into national legislation via the Greenhouse Gas Emissions Trading Scheme (Amendment) and National Emissions Inventory Regulations 2005, which came into force on 13 November 2005 [11].

2.2.11 The Linking Directive gives Member States discretion to allow EU ETS operators to use JI and CDM credits to comply with their obligations under the EU ETS Directive. A consultation on options for transposing the Linking Directive into national legislation in the UK, in particular on the use of CERs in Phase I and the process of project approval and participation was held in the summer of 2005. The results of this consultation were used to inform the transposing regulations which were produced alongside a full RIA and guidance notes for operators in October 2005 [12].

2.2.12 In amending Directive 2003/87/EC the Linking Directive states that "the total use of ERUs and CERs shall be consistent with the relevant supplementarity obligations under the Kyoto Protocol and the UNFCCC and the decisions adopted there under."

Supplementarity

2.2.13 By imposing emissions limits on Annex I countries only, the Kyoto Protocol requires developed countries to take the lead in reducing greenhouse gas emissions. This is reinforced by the requirement in the Marrakech Accords stating, "the use of the mechanisms shall be supplemental to domestic action and that domestic action shall thus constitute a significant element of the effort made by each Party…" [13]. This is primarily to recognize that global warming has, to date, been caused by industrialization in developed countries who have already benefited from higher living standards and to demonstrate to developing countries that industrialised countries are willing to make real efforts to reduce their own emissions, rather than expecting others (i.e. developing countries) to make the reductions and buying credits from them.

2.2.14 The requirement that the use of the project mechanisms is supplemental to domestic action is known as the "principle of supplementarity" There is currently no agreed EU definition of supplementarity. Supplementarity therefore needs to be considered in the context of development of domestic policies on use of project credits. The Linking Directive (see below) requires a limit on project credit use to be set by each Member State.

[11] SI 2005 No. 2903, available from: http://www.opsi.gov.uk/si/si2005/20052903.htm
[12] Please see http://www.defra.gov.uk/environment/climatechange/trading/eu/kyoto/index.htm for further information.
[13] Decision 15 of the Conference of the Parties 7th session (15/CP.7), available at: http://unfccc.int/resource/docs/cop7/13a02.pdf - page=2.

2.3 Rationale for Government Intervention

2.3.1 Criterion 12 of Annex III of the ETS Directive states that national allocation plans must specify the maximum amount of CERs and ERUs that may be used for compliance purposes by operators in the EU ETS.

2.3.2 Credits generated by projects are additional to EU allowances thereby increasing the number of allowances in the market that can be used for reconciliation. This gives EU ETS operators another option for complying with their obligations, and could potentially reduce the overall price of EU ETS allowances. The majority of projects are non-CO2 and these gases are characterized by their greater global warming potential and the lower costs of abatement. For example, HFC23 has a global warming potential 11,700 times that of CO2 – so for every tonne abated 11,700 credits are generated. The costs associated with abating this gas vary between about US$0.30 and US$0.80 per tCO_2e.

2.3.3 The use of project credits is likely to reduce incentives for abatement in the EU (assuming this is more costly). In setting a limit the Government needs to consider the balance between encouraging domestic/EU abatement by driving investment in low carbon technologies, and allowing installations to buy credits generated from projects outside the EU, that will reduce compliance costs for operators and encourage the introduction of less emission intensive technologies in developing countries.

2.3.4 The benefits of the use of CERs and ERUs for UK operators depend on the costs of CERs and ERUs relative to EUAs in Phase II. As stated allowing the use of CERs and ERUs essentially increases the range of abatement opportunities to operators within the EU ETS. If some of these are cheaper than domestic abatement opportunities, operators who invest in JI or CDM projects will be able to comply with the scheme more cheaply. Prohibiting the use of credits in the UK (Member States have the option not to allow credit use by participating installations i.e. a limit of 0% could be set) would therefore deny UK operators the opportunity to take advantage of these benefits.

2.3.5 Forward contracts for delivery of CERs are currently around €5-12[14], but recent price data for ERUs is not available. CERs are currently trading at a lower price than EUAs due to the uncertainty surrounding CDM projects, and the number of credits that will be delivered by the projects. As the scheme progresses, many stakeholders expect prices to converge as arbitrage would drive prices together[15]. Convergence is somewhat dependent on the relative efficiency of the market and would require a certain level of liquidity. Operators could therefore capture the benefits of cheaper abatement

[14] Data for CER prices is not readily available - prices are often not publicly disclosed, there are differences in buyers' price reporting practices, and prices vary widely according to the type of contract traded and share of project risk between buyer and seller. The current CER price reflects the market assessment of project, delivery and political risks attached to the CDM.

[15] The same asset does not always trade at the same price on all markets. Arbitrage (the law of one price) has the effect of causing different prices in different markets to converge as people buy the asset where it is cheapest.

opportunities if they invest directly in abatement opportunities but not if they purchase project credits on the open market.

Kyoto Protocol obligations

2.3.6 In the Kyoto Protocol and the Marrakech Accords the UK signed up to allow for use of flexible mechanisms. The CDM is the only Kyoto mechanism to incentivise mitigation activity developing countries. If Member States were to decide not to allow credits from the CDM into the EU ETS, the benefits which countries hosting are set to receive from the CDM would be reduced. JI provides for similar benefits to developed countries, in particular those which may not immediately establish emissions trading schemes to link to the EU ETS, and in sectors not covered by emissions trading.

2.3.7 Access to the flexible mechanisms will ensure that UK business can comply with obligations under the EU ETS as cost-effectively as possible.

3. CONSULTATION

3.1 Within Government and the Devolved Administrations

3.1.1 Please see the overarching Phase II RIA for details of consultation within Government and the Devolved Administrations on Phase II of the EU ETS.

3.2 Public Consultation

3.2.1 A public consultation on the draft Regulations for the transposition of the Linking Directive was held between 10 June and 19 August 2005. The results of this consultation were taken into account by officials and Ministers in making the final decisions on how to transpose the Directive into UK law. The consultation paper, accompanying RIA and analysis of consultation responses received are available from:
http://www.defra.gov.uk/corporate/consult/euets-linkingdir/index.htm

3.2.2 A report on the July 2005 Phase II consultation which included some questions on project credits and the Government's policy decisions was published alongside the draft NAP on 28 March 2006. The consultation on the draft NAP outlined the Government's proposal for the use of auctioning in the second trading period, and sought views from stakeholders that fed into the final development of policy options. The consultant's analysis of the March consultation will be published alongside this RIA. For further details on public consultation and stakeholder engagement in developing Phase II policy, please see the overarching Phase II RIA.

4. OPTIONS

4.1 In Phase II, Member States must set a quantitative limit on operator use of JI and CDM credits . This RIA considers options for setting limits on the use of CERs and ERUs. The Government is currently considering the issue of a limit on the basis of the considerations set out in paragraph 2.1.5 above.

Decision 1: Whether to impose a limit

4.3 In Phase I, there is no limit on use of project credits by EU ETS operators[16]. The "do nothing" option for Phase II would therefore be to maintain this position and not impose a limit on operators' use of project credits.

4.4 The Emissions Trading Directive, as amended by the Linking Directive, requires that limits be placed on the use of project credits in Phase II and subsequent Scheme phases.

Option 1: do not impose a limit
Option 2: Impose a quantitative limit as a proportion of effort
Option 3: Impose a quantitative limit (proportion of effort) and a qualitative limit

Decision 2 : Whether to impose a limit at national level or installation level

4.5 The Commission's guidance on Phase II National Allocation Plans[17] states that a limit can be specified at either installation level, with each installation facing a limit of, for example, 8% of their allocation, or at Member State level, with an aggregate limit of, for example, 8% of total allocation (cap) for all UK installations and individual operators subject to higher or lower percentages within this.

Option 1: Set a limit at national level
Option 2: Set a limit at installation level

Decision 3: Whether to allow banking of entitlement to use project credits between years

Option 1: Allow banking
Option 2: Do not allow banking

Decision 4: To have a flat rate or vary the limit according to the effort required in the relevant sector

[16] As per regulations transposing the Linking Directive into UK legislation: SI 2005 No. 2903, available from: http://www.opsi.gov.uk/si/si2005/20052903.htm
[17] Available from: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52003DC0830:EN:HTML

Option 1: Flat rate to all sectors
Option 2: Vary limit according to the effort required in the relevant sector

5. BENEFITS AND COSTS

5.1 Decision 1: Whether to impose a limit

Option 1: Do not impose a limit

Benefits

5.1.1 Having no limit on the number of project credits that an operator can use could increase incentives to invest in projects to supply lower carbon technologies outside the EU.

5.1.2 It will also allow firms more flexibility to comply with their obligations at least cost.

Costs

5.1.3 Not imposing a limit would entail a risk of the UK's Phase II NAP being rejected or the Commission taking infraction proceedings against the UK. Under the terms of the Linking Directive, Member States are obliged to impose a limit on operators' use of project credits for Phase II, in line with the principle of supplementarity.

5.1.4 Incentives for domestic (or EU) abatement will be reduced if no limit is set on the use of project credits. The generation of project credits increases the total number of EU allowances in the market, which may well reduce the overall price of allowances. This would mean that, at the margin, it would become more attractive for firms to buy allowances on the market than to abate emissions.

5.1.5 This may also limit any incentives for industry to develop low carbon technologies as it makes it easier for them to comply with their obligations without reducing emissions domestically. Early domestic action arguably has economic benefits, which would be foregone if all installations complied with their obligations solely through the use of project credits. In particular, it is widely accepted that in order to achieve a slow transition to a low carbon economy, cost effective policies must be in place and a sufficiently long timescale has to be provided for adjustment. Emissions reductions incentivised by EU ETS participation will contribute to this transition. The argument for early action becomes stronger the more likely its is that a carbon constrained world will materialise.

5.1.6 Not setting a limit would be inconsistent with existing policies on moving towards UK domestic targets on carbon dioxide reduction and hence could be

seen as compromising our leadership position on climate change. This is because abatement would be occurring outside the EU.

Option 2: Impose a quantitative limit as a proportion of effort

5.1.7 Government proposes that the limit on project credit use should be linked to the effort level set. The benefits of this approach are set out below.

5.1.8 Table 1 illustrates how many credits may be brought into the scheme if different limits on total effort are applied. This cap level includes the estimated 9.5m allowances for expansion sectors. Limits of 0%, 50% and 100% of effort have been illustrated, showing the possible range of outcomes. It is important to note that under this option the limit could be set at anywhere between 0% and 100%. Columns D, E & F show the percentage of allowances each installation would be allowed to submit as credits.

Table 1

Total Phase II cap $MtCO_2$ (p.a.)	100% Effort: number of Phase II allowances allocated below BAU of 267m + 9.5m (p.a.)	50% of effort (p.a.) [= B*0.5]	Credits permitted per installation at 0% Effort	Credits permitted per installation at 50% Effort [=C/A]	Credits permitted per installation at 100% Effort [=B/A]
A	B	C	D	E	F
1231 (237 + 9.5)	150 (30)	75 (15)	0%	6.2%	12.3%

5.1.9 Table 2 shows the potential benefit to UK operators of allowing them to comply with their targets using some credits, based on the different options presented in Table 1 above. The benefits estimated assume a range of EUA prices of €5-40[18] and a range of prices for CERs and ERUs of €5-12 per tonne abated. As mentioned above, as EUA and project credit prices are expected to come closer together in Phase II, the benefits in Table 2 below would then only be available to operators who invest directly in JI/CDM projects (not those who simply purchase their credits from the market) and so incur investment costs equivalent to €5-12 per tonne abated. The bottom end of the benefits range is always zero as this assumes that the cost of investment required to obtain one credit is equal to the EUA price. The top end of the benefits range assumes both EUA prices and the cost of acquiring an allowance via JI/CDM investment are at the higher end of the ranges

[17] The lower bound price of €5 reflects a level below which the value of trading for installations with excess allowances is likely to be small. It is acknowledged, however, that this may not represent the minimum cost of trading, which may be lower owing to many large installations still finding it profitable to sell allowances below this price. €40 is seen as a likely upper limit as above this price firms are increasingly likely to take action to reduce emissions, such as switching production away from carbon intensive processes.

assumed (€40 for an EUA and €12 to obtain a project credit). For each different cap level, the difference between these two figures is then multiplied by the number of project credits which would be allowed into the scheme under each of the different options (and converted from Euros into GBP) to illustrate what the maximum level of benefits to the UK is likely to be.

Table 2 – Potential benefit to operators of options presented in Table 1, £m [19]

Phase II cap p.a. (MtCO2)	**Phase II effort p.a. (MtCO2)**	Potential net benefit per year **(to operators, £m)**		
		0% of effort	50% of effort	100% of effort
237 + 9.5	30	0	0-290	0-590

Benefits

5.1.10 Limiting the use of project credits to a proportion of effort would help to ensure a certain level of EU action is needed in order to meet the UK's emissions obligations under the EU ETS, by guaranteeing that project credits only contribute a share of the total required reduction in emissions from business as usual (BAU) projections.

5.1.11 A limit is necessary to comply with the requirements of the Linking Directive as well as the criteria set out in Annex III of the Directive.

5.1.12 The benefit to UK operators will depend on the relative price of project credits as well as the ability of UK operators to access project credits through direct investment in abatement projects, where it may be possible to acquire the allowances at a lower cost than through trading on the market. The benefit to the UK is also likely to depend on how other Member States plan to implement Phase II of the scheme (which will not become clear until all Phase II NAPs are approved), as well as on how climate change policy in non-EU countries evolves.

Costs

5.1.13 Not imposing a quantitative limit linked to effort risks oversupply of project credits into the market. It is very difficult to assess the impact of this as it depends on the initial level of EU allocation, the limits put in place by other Member States and climate policy in non-EU countries. A recent publication by Climate Strategies[20] included a comparison of the likely demand generated by caps (as set out in published draft NAPs) with potential volume of project credits available to ETS installations. With the assumption of high inflows of project credits into the ETS (200Mt/yr), there would be an excess supply of credits in more than 80% of scenarios. As a result, the benefit estimates in Table 2 should be considered an indication of maximum likely benefits.

[19] Euros have been converted into GBP assuming an exchange rate of £1 = €1.45
[20] http://www.climate-strategies.org/uploads/3_Emission_projections_27_9_2006.pdf

5.1.14 A very strict limit could reduce technology transfer and other benefits to developing countries, which may reduce the facilitation of international action to tackle climate change.

Option 3: Impose a quantitative limit (proportion of effort) and a qualitative limit

5.1.15 A qualitative limit would restrict use of credits from certain types of CDM or JI projects, for example those that reduce emissions of non-CO_2 greenhouse gases.

Benefits

5.1.16 A qualitative limit could be established that only allows UK operators to use project credits that meet certain criteria (e.g. the "Gold Standard"). This would ensure UK operators invest in projects that guarantee environmental integrity and a true contribution to sustainable development.

5.1.17 Use of non-CO_2 credits could reduce the contribution of the EU ETS to national CO_2 goals, as EU ETS operators may comply through CDM credits from non-CO_2 gases, particularly if these credits are cheaper than EUAs. A qualitative limit would exclude non–CO_2 related credits from the UK, supporting the contribution of the EU ETS to the delivery of CO_2 reduction targets within the EU and could stimulate investment in CO_2 projects abroad.

Costs

5.1.18 A qualitative limit is not required in Phase II. Imposing a qualitative limit would narrow the direct JI/CDM investment opportunities and range of compliance options available to UK operators. This would be expected to increase costs to UK operators, since supply is essentially reduced, and may potentially affect their competitiveness with other EU Member States. However, the actual impact depends on the limits imposed by other Member States.

5.1.19 Depending on the relative prices of CERs and EUAs, imposing a qualitative limit could be at the expense of cheaper compliance options for UK operators. This may be seen as imposing additional costs on UK business relative to their EU competitors.

5.1.20 Responses to the Phase II July 2005 consultation indicated that the majority of respondents did not support a qualitative limit.

5.2 Decision 2 : Whether to impose a limit at national level or installation level

5.2.1 The Commission's guidance on Phase II NAPs states that Member States are free to choose whether to apply the limit individually in respect of each installation, or collectively to all installations. It recommends, for greater

flexibility, to apply the limit for the entire trading period and collectively to all installations. There are inherent pros and cons to each of these approaches, as set out in Table 3 below.

5.2.2 The UK Government proposes that limits should be set at an installation level, to ensure smaller participants are not disadvantaged, for greater transparency and to avoid a 'race to the limit'. The Government also proposes that the limit would applied annually, rather than for the Phase.

5.2.3 Setting a quantitative limit at a national level may mean that large operators with more experience of the market buy a large number of project credits and seek to surrender them early. This may impact on liquidity in the market and also lead to a greater discrepancy between costs of compliance for large operators and others. Setting a limit at installation level should eliminate this risk.

Option 1: Set a limit at national level
Option 2: Set a limit at installation level

Table 3

Limit by Phase at national level	
Pros	*Cons*
Recommended in Commission guidance	Appears to require a strained interpretation of the Directive.
Greater flexibility	Market uncertainty as there is no guarantee that credits will be available beyond the first year of the phase i.e. the limit could be reached at any time
Could reduce compliance costs of installations with very limited abatement potential, enabling these installations to comply by using a higher proportion of project credits	A national limit would require a gateway for use of credits which would close as the limit was approached. This would segregate the EU market in credits and may also drive a rush to the limit by larger players
	Large participants favoured (see 5.2.3)
	Lack of transparency on when the limit had been reached

Limit annually at installation level	
Pros	*Cons*
Ensures large players do not monopolise the market	Increased transaction costs for operators
Encourages wider involvement in market for project credits – potentially reducing cost of compliance, and increasing the choice of compliance options available.	
Provides certainty to individual operators that they can access credits by giving them an individual quota	

In line with the interpretation of the Directive	

5.3 Decision 3: Whether to allow banking

Option 1: Allow banking between years

Benefits

5.3.1 Allowing banking would increase flexibility for operators in complying with their obligations, allowing them to choose the most cost-effective option over the Phase.

5.3.2 The time scale for the delivery of emission reductions from likely JI or CDM projects may require banking to provide an incentive for investment in these projects by reducing uncertainty.

5.3.3 Banking allows reductions in emissions to be brought forward. As global warming is a function of the stock of carbon dioxide emissions, reducing emissions now will have earlier benefits and may help to reduce the risks of irreversible climate change.

Costs

5.3.4 Allowing banking between years will add an extra layer of complexity and may increase administrative costs of the Scheme.

Option 2: Do not allow banking between years

5.3.5 See costs and benefits of Option 1 above.

5.4 Decision 4: To have a flat rate limit or vary limit according to the effort required in the relevant sector

5.4.1 Only the Large Electricity Producer (LEP) sector receives an allocation below BAU projections in Phase II. The limits on project credit use could be set at a flat rate across all installations or could be varied according to the effort required (i.e. allow use of project credits only by the LEP sector as this is the only sector to which a cut is applied).

Option 1: Flat rate to all sectors

Benefits

5.4.2 All installations are treated equally which will increase transparency and decrease complexity of the scheme.

5.4.3 All installations benefit from the increased flexibility resulting from being able to use project credits as a way of meeting their obligations.

Costs

5.4.4 The LEP sector would only be permitted to use the same percentage of project credits as other installations, even though all the reduction of emissions below BAU comes entirely from the LEP sector.

Option 2: Vary limit according to the effort required in the relevant sector

Benefits

5.4.5 The LEP sector would have more opportunity to meet their obligations using project credits which may reduce costs of compliance to this sector.

Costs

5.4.6 Unequal treatment between sectors may increase the administrative burden and complexity of the Scheme.

5.4.7 Sectors other than LEP do not benefit from the flexibility of using project credits to comply with their obligations.

6. SMALL FIRMS' IMPACT TEST

6.1 Alongside the consultation on the draft regulations for transposing the Linking Directive (see section 3.2) the Government held stakeholder workshops particularly targeting smaller operators and public sector organisations covered by the Scheme. These were held in London and Edinburgh and explained how the Directive provides options for EU ETS compliance using emission reduction credits derived from CDM and JI projects. Please see Linking Directive full RIA for further details.

6.2 Please see the overarching Phase II RIA for a discussion of the Scheme's impact on smaller operators and further details on how small firms have been involved in the Phase II consultation process.

6.3 With particular reference to the issue of Kyoto project credits, it is possible that larger firms would have an advantage over smaller firms in terms of accessing project credits due to the costs required to invest in a project. However, as discussed in the overarching Phase II RIA, the EU ETS is not intended to capture smaller installations so firm scale should not therefore be a barrier to project credit access in most cases.

6.4 In addition, installation specific limits would reduce the potential for large buyers and sellers to dominate the market and ensure that smaller operators have access to project credits. This in turn would encourage a broad range of companies to consider the use of credits for compliance purposes, promoting

active participation in the trading scheme and more investment in low-GHG technology in developing countries thus aiding their sustainable development.

7. COMPETITION ASSESSMENT

7.1 To the extent that the Linking Directive allows access to a lower cost source of allowances, this may be beneficial for the competitive position of UK businesses affected by the EU ETS, particularly those exposed to international competition as it will reduce the potential compliance costs to UK firms.

7.2 Setting a limit on UK operators' use of project credits for compliance purposes may therefore increase costs for some operators by limiting the range of compliance options. Depending on the relative prices of project credits and EUAs, imposing a quantitative and/or qualitative limit on the number of credits that may be used to meet compliance requirements in the EU ETS could be at the expense of cheaper compliance options for UK operators. The limits on credits set by other Member States could have an adverse or positive impact on UK competitiveness, depending on the context within which these limits are set (for example, how tight the corresponding cap is).

7.3 A recent literature review considering the competitiveness impacts of the EU ETS[21] concluded that there is very little awareness in the literature of the possibility or possible future size of trade in project credits. It is widely acknowledged that (subject to national limits) many credits may be available from some countries (for example, Ukraine, Russia). It is less widely acknowledged that trade in project credits is beginning to take place. There is almost no analysis of the extent to which future trade is likely and the impact this would have on EU ETS allowance prices.

7.4 Smaller operators may have greater difficulty accessing project credits than larger investors. The informational and administrative requirements for investing in CDM projects are substantial and it is likely that only large companies have the capacity to be directly involved in such investment. However, as the process for JI and CDM projects continues to develop and the market expands project credits should become accessible to small operators through the wider allowance market.

7.5 The market for allowances is growing and traded volumes are increasing[22]. If the lowest cost abatement opportunities are only available to a small number of operators it is possible that the supply of allowances to the market could be in the hands of just a few players. Allowing the use of project credits potentially provides for a greater diversity of suppliers to the market if

[21] http://www.defra.gov.uk/environment/climatechange/trading/eu/phase2/pdf/competitive-impact.pdf

[22] On average in 2006, over 3million allowances are being traded each day compared to a daily average of over 1 million in 2005.

investors in these projects are different to investors in abatement within the EU.

8. ENFORCEMENT, SANCTIONS AND MONITORING

8.1 With regard to the use of project credits in the EU ETS, it is important to stress that there are no supplemental enforcement or sanctions or additional monitoring requirements applicable to EU ETS operators. The use of project credits provides operators with a means of potentially reducing their compliance costs and increasing their compliance options. For information on the general enforcement, sanctioning and monitoring requirements of the EU ETS, please see the overarching Phase II RIA.

8.2 The CDM Executive Board and JI Supervisory Committee have been established to oversee the use of Kyoto mechanisms and both these bodies therefore form part of the enforcement and monitoring procedures relating to JI/CDM credits. Further detail on their respective roles is available from the UNFCCC website: http://unfccc.int.

9. IMPLEMENTATION AND DELIVERY PLAN

9.1 Please see the overarching RIA for details of the implementation and delivery plan.

10. POST IMPLEMENTATION REVIEW

10.1 Please see the overarching RIA for details of post implementation review

11. SUMMARY AND RECOMMENDATIONS

Option	Benefits	Costs
Decision 1: Whether to impose a limit		
1: No limit	Increases incentives to invest in projects Allow firms more flexibility to comply	Significant risk of UK NAP being rejected Incentives for domestic (or EU) abatement will be reduced May limit incentives for industry to develop low carbon technologies Inconsistent with existing policies on moving towards UK domestic target. Riisk oversupply of project credits onto the market
2: Quantitative limit	Helps to ensure certain level of EU action A limit is necessary to comply with the requirements of the linking directive	A very strict limit could reduce technology transfer Reduces compliance options for firms
3: Quantitative and qualititative limit	Ensures UK operators invest in effective projects.	Narrows the direct JI/CDM investment opportunities

		Reduces compliance options for firms Could impose additional costs on UK businesses relative to EU competitors
Decision 2: Set a limit at installation or national level		
1: National level	Could reduce compliance costs of installations with very limited abatement potential Recommended by Commission Guidance Greater Flexibility	Large participants favoured Strained interpretation of directive Lack of transparency on when the limit had been reached
2: Installation level	Ensures large players do not monopolise market Provides certinaty to individual operators In line with Directive	Increased transaction costs for operators
Decision 3: Banking between years		
1: Allow banking	Increased flexibility for operators Reduces uncertainty Allows reductions in emissions to be brought forward	Adds complexity to Scheme
2: Do not allow banking	Reduces admin costs No additional complexity	Reduces flexibility for operators in complying
Decision 4: Flat rate or vary rate		
1: Flat rate	Increases transparency All installations benefit from increased flexibility in meeting obligations	Reduced opportunity for LEP sector to meet obligations despite bearing the whole burden of the level of effort
2: Vary rate	LEP sector would have more opportunity to meet their obligations	May increase admin burden and complexity Other sector do not benefit from use of project credits to comply with obligations

Recommendations

11.1 This RIA makes the following recommendations:

- A quantitative limit should be placed on operators' use of project credits in Phase II, in accordance with the requirements of the Linking Directive. This limit will be based on a proportion of the level of effort.
- This limit should be applied annually at an installation level.
- A qualitative limit should not be imposed.
- Banking between years will be allowed.

12. DECLARATION

12.1 I have read the regulatory impact assessment and I am satisfied that the benefits justify the costs.

Signed

Date

IAN PEARSON, MINISTER OF STATE

DEPARTMENT FOR ENVIRONMENT FOOD AND RURAL AFFAIRS