



**Emission Impossible:**  
access to JI/CDM credits  
in phase II of the EU  
Emissions Trading Scheme

WWF-UK

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## SUMMARY

It's a critical time for the EU Emissions Trading Scheme (ETS). With the start of phase II (2008 to 2012) now only 6 months away the European Commission is still ruling on Member State plans, and the review of what the scheme will look like after 2012 is well underway.

In addition to making decisions on the level of emissions caps in each Member States plan for phase II, the European Commission also has the final say on the level of access to emission reduction credits from projects outside the EU<sup>1</sup>. Access to these credits is supposed by law to be "supplemental" to emissions reductions that take place within the EU.

WWF has assessed 9 of the plans (Germany, UK, Poland, Ireland, France, Spain, Netherlands Portugal and Italy) and estimates that between 88% and all of the emissions reductions required under the combined cap for these countries could theoretically take place outside the EU. This could have serious consequences for investment decisions made within the EU by heavy industry - including the power sector – potentially leading to a "lock in" to high carbon investments and soaring emissions from these sectors for many years to come. This would fatally undermine EU emission reduction targets for 2020 and 2030.

Considering the large proportion of emissions reductions that could take place beyond the borders of the EU during phase II we strongly question the robustness of the formula applied by the Commission in assessing Member States compliance' with the supplementarity principle.

In addition to concerns over the volume of credits which ETS sectors will be allowed to buy are issues over the quality of these credits, particularly around whether they are additional. This relies on the project developer being able to prove that the project would not have taken place in the absence of the carbon markets. WWF is concerned that approval of a project does not currently guarantee that projects are additional nor that they contribute to sustainable development, key objective of the Clean Development Mechanism (CDM), and a number of these are highlighted in the report.

In combination – the decisions to allow access to large volumes of credits and concerns over the additionality of these credits raises serious questions about the extent to which the ETS will deliver significant emissions reductions during phase II. It is vital that these shortcomings are put right in the review for the ETS post 2012.

## INTRODUCTION

The ETS is a crucial cornerstone of climate policy in Europe and phase II will be a real test as to whether market based mechanisms can deliver significant emissions reductions. The sectors within the scheme currently account for close to half of Europe's carbon dioxide emissions and whilst the Commission's decision to clamp down on the caps proposed by most Member States for the second phase has received wide coverage in the media - access to the volume of emissions reduction credits from projects outside the EU has received less attention. This design feature is equally important as it crucially influences where investment in low carbon technology will take place.

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<sup>1</sup> Known as Clean Development Mechanism and Joint Implementation.

This report follows on from the analysis of the draft National Allocation Plans (NAPs) undertaken by Ecofys on behalf of WWF-UK in November 2006<sup>2</sup>. Since then the Commission has ruled on a number of these plans, including participants' access to volumes of emission reduction credits. This report focuses on the following countries which together account for roughly 80% of emissions in the ETS:

- Germany, UK, Poland, Ireland, France, Spain, Netherlands and Italy (plans ruled on by the EC)
- Portugal (draft plan available)

Furthermore this report calls into question the robustness of the CDM process in terms of ensuring that emissions reductions from projects are real and additional and argues that the environmental and social impacts of projects are often overlooked.

#### SUPPLEMENTARITY AND THE EU ETS

For the second phase of the EU ETS (2008 to 2012) Member States are obliged to propose limits on the number of project credits that the installations within the scheme will be able to buy. This is then assessed by the European Commission. For phase II the Commission has sought to assess the compatibility of Member States' proposed JI/CDM limits in their NAPs with the following wording in the EU ETS Directive:

*“In accordance with the relevant provisions of the Kyoto Protocol and Marrakesh accords, the use of the mechanisms should be **supplemental** to domestic action and domestic action will thus constitute a significant element of the effort made”<sup>3</sup>*

The term “*supplemental*” has its origins in the Kyoto Protocol but has never been clearly or quantifiably defined. However, WWF takes this to mean that the use of project credits may only constitute a small part of the effort (significantly less than 50%) required to meet the cap

Table 1 overleaf shows the results of the European Commission's interpretation of this for 8 of the NAPs submitted (and makes an assessment of how it might judge Portugal). Despite the EC's rulings, however, there are strong indications that access to JI/CDM credits by ETS sectors in phase II will be significant and constitute a large proportion of the emissions reductions required.

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<sup>2</sup> “Use of Joint Implementation/Clean Development Mechanism credits by participants in phase II of the EU Emissions Trading Scheme” Ecofys, November 2006 [http://www.wwf.org.uk/filelibrary/pdf/ecofys\\_271006\\_report.pdf](http://www.wwf.org.uk/filelibrary/pdf/ecofys_271006_report.pdf)

<sup>3</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC

**Table 1: JI/CDM credit limits proposed by Member States and the decision by the European Commission**

	<b>% of total cap proposed in draft NAP</b>	<b>% of total cap allowed by EC<sup>4</sup></b>
France	13.50	13.50
Germany	12	20
Ireland	50	21.90
Italy	25	15
Netherlands	12	10
Poland	25	10
Portugal	10	15
Spain	37.7	20
UK	8	8

#### ACCESS TO PROJECT CREDITS IN PHASE II OF THE EU ETS - AN ESTIMATE

WWF has sought to estimate the volume of project credits that Germany, UK, Poland, Ireland, France, Spain, Italy, Portugal and the Netherlands will have access to in phase II of the scheme<sup>5</sup>. Based on existing data and our own analysis (summarised in table 2 below) this shows that:

- The total annual net shortage of allowances for phase II in these countries is between 144.45 and 257.45 million tonnes of carbon dioxide (MtCO<sub>2</sub>) per year. The higher figure has been calculated using business as usual (BAU) emissions projections figures in the draft NAPs. As official BAU projections are often subject to inflation (as evidenced by the over allocation of allowances that has occurred in phase I of the scheme) an estimate of BAU based on PRIMES projections<sup>6</sup> has also been used which gives the lower figure.
- The maximum allowed use of JI/CDM credits by installations in the ETS in these countries is 227.22 MtCO<sub>2</sub> per year.

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<sup>4</sup> Portugal's NAPs have yet to be ruled on by the EC. The figure given here are based on an estimate by New Carbon Finance & Dresdner Kleinwort Equity research from November 2006 who applied the same methodology that is being used by the EC.

<sup>5</sup> See Annex I for a break down of these figures.

<sup>6</sup> PRIMES is a "market equilibrium" model for energy supply and demand in the EU(30) often used in policy development and evaluation by the European Commission. It is based on energy data for all Member States and Member States have the chance to comment on data and assumptions.

**Table 2: an estimate of the net overall excess/shortfall in the EU ETS (for the countries analysed) once potential access to JI/CDM volumes are taken into account.**

	<b>MtCO<sub>2</sub> per annum</b>
<b>Average emissions 2008 to 2012</b>	1674 to 1787
<b>Overall phase II allocation</b>	1529.55
<b>Average excess/(shortfall)</b>	(144.45) to (257.45)
<b>Maximum allowed access to JI/CDM</b>	227.22
<b>Net overall excess/(shortfall) of allowances once allowed JI/CDM access is taken into account.</b>	<b>82.77 to (30.23)</b>

**This means that in theory therefore between 88.26% and all of the emissions reductions<sup>7</sup> required under the combined cap for the 9 countries assessed could take place outside the EU during phase II of the scheme.**

These findings are broadly corroborated by other estimates. For example:

- New Carbon Finance estimates that the ETS sectors will face a shortfall of emissions credits of around 1.5 billion tonnes of CO<sub>2</sub> (btCO<sub>2</sub>) for the whole of phase II (or 300 MtCO<sub>2</sub> per year) and that the limit on project credits could be around 1.3 btCO<sub>2</sub> (or 260 MtCO<sub>2</sub> per year)<sup>8</sup> – or 87% of the effort required to meet the cap; and
- in January the Fraunhofer Institute assessed the first 13 NAPs judged by the Commission. This indicated that there would be a shortage of approximately 142.54 MtCO<sub>2</sub> per year for phase II and that access to project credits could meet 111.27MtCO<sub>2</sub> of this<sup>9</sup> (or 78.06%).

Others sources paint an even more worrying picture:

*“The CER caps are not binding as they are much higher than the shortage of EU allowances”<sup>10</sup>*

Global supply and demand of JI/CDM during phase II (2008-2012)

We consider that the expected global supply of JI/CDM is unlikely to be the limiting factor to the use of these credits by ETS participants in phase II once potential use by governments to meet their Kyoto targets is taken into account. In the report commissioned by WWF last year Ecofys

<sup>7</sup> Over 100% - some 157.30%. So, allowed use of credits could actually exceed the shortfall in emissions allowances within the scheme during phase II.

<sup>8</sup> “European firms no longer able to buy their way out of emission targets” New Carbon Finance press release, 30 November 2006, [http://www.newcarbonfinance.com/press\\_releases/NCF\\_PR\\_30.11.2006.pdf](http://www.newcarbonfinance.com/press_releases/NCF_PR_30.11.2006.pdf)

<sup>9</sup> “Stringency and economic efficiency of NAPs for phase 2” presentation given at the ENDS conference, London, 30 January 2007 by Joachim Schleich, Fraunhofer Institute Systems and Innovation Research (ISI), Karlsruhe, Germany.

<sup>10</sup> “EU CER/ERU caps: Who imports what, and who competes with whom?” Presentation by Axel Michaelowa at Carbon Markets Insights, Copenhagen, 13 March, 2007.

estimated the supply of credits to be around 400 MtCO<sub>2</sub>eq per year during 2008 to 2012 – with a possible range of between 200 and 600 MtCO<sub>2</sub>eq per year. A conservative global demand from governments was estimated at 130 MTCO<sub>2</sub>eq per year<sup>11</sup>.

This assessment is supported by the recently updated Point Carbon forecast which indicates that there will be sufficient supply of credits from JI/CDM projects to meet the demand from the EU ETS in phase II<sup>12</sup>.

#### THE “QUALITY” OF CDM PROJECTS

In addition to concerns over the volume of credits which ETS sectors will be allowed to buy are issues over project quality. The CDM has two aims – to assist countries with emissions reduction targets in meeting those targets by using credits generated from the developing world, and to help developing countries achieve sustainable development. Both aims depend on proving that projects are additional to what would have happened in the absence of the carbon markets. It is important to remember that CDM projects do not in themselves reduce net global greenhouse gas emissions - they merely allow the project investor to pollute more at home. Ensuring that projects are additional is therefore crucial to maintaining the environmental integrity of the whole system as a breach of this means that global emissions actually increase.

WWF is concerned that approval of a project by the CDM Executive Board does not currently guarantee that projects are additional. Furthermore we are concerned that sustainable development is often overlooked - a situation which has likely been exacerbated by the fact that the CDM Executive Board does not provide common criteria for a project’s contribution to sustainable development.

Both of these issues were highlighted in a recent Channel 4 News report<sup>13</sup> which focussed on two projects in India. The first - the Shri Bajrang waste-heat recovery project in Raipur which is housed within a sponge iron plant that is suspected of polluting the soil and water in the area. The second, another waste heat recovery project, in a steel plant in Karnataka state where it is purported that the technology to recover heat would have been installed regardless of the existence of the carbon market. Worryingly an advisor to the CDM Executive Board, Dr Axel Michaelowa, told the programme that he thought one third of the 50 projects he had surveyed in India were not additional. More recently the Guardian newspaper reported that up to 20% of all the carbon credits already issued under the CDM could be in doubt<sup>14</sup>.

Examples of other specific projects where concerns have been raised are as follows:

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<sup>11</sup> Ecofys, November 2006 [http://www.wwf.org.uk/filelibrary/pdf/ecofys\\_271006\\_report.pdf](http://www.wwf.org.uk/filelibrary/pdf/ecofys_271006_report.pdf). Please note that this estimate for demand currently excludes Canada.

<sup>12</sup> As reported in “Carbon Market Europe – Guest Commentary – CDM/JI supply: will there be enough?” 1 June 2007, Point Carbon

<sup>13</sup> “Carbon trading ‘not cutting CO<sub>2</sub>’” Tom Clarke, Channel 4 News report, 7 February 2007 [http://www.channel4.com/news/articles/business\\_money/carbon+trading+not+cutting+co2/191945#fold](http://www.channel4.com/news/articles/business_money/carbon+trading+not+cutting+co2/191945#fold)

<sup>14</sup> “Abuse and incompetence in fight against global warming” Nick Davies, 2 June 2007, The Guardian. <http://business.guardian.co.uk/story/0,,2093836,00.html>

**Xiaogushan hydropower project in People's Republic of China****Host:** China    **Status:** registered    **Type:** hydro    **ktCO<sub>2</sub> per year:** 313**Years:** 10    **Credit start:** 1 March 2006**Concern raised:** project is not additional.

This project was registered by the CDM Executive Board despite a submission from the International Rivers Network to the project validators prior to validation in August 2005 which stated:

*“Xiaogushan is non-additional and therefore cannot be validated as a CDM project. Project documentation from the Asian Development Bank clearly states that Xiaogushan was the least cost option for Gansu and that revenue from CDM credits (CERs) was irrelevant to the decision to go ahead with the project. Construction began in October 2003<sup>15</sup>.”*

This project is now due to receive more than \$30 million worth of credits through the international carbon market<sup>16</sup>.

**22.5 MW Bhilangana Hydropower project (BHPP)****Host:** India    **Status:** registered    **Type:** hydro    **ktCO<sub>2</sub> per year:** 109**Years:** 10    **Credit start:** 16 April 2007**Concerns raised:** no satisfactory stakeholder consultation, likely negative environmental impact, project is not additional.

In June 2006 the South Asia Network on Dams, Rivers and People made a submission to the project validators. This included claims that the project developers were violating the CDM norms for consulting stakeholders and local groups, that the project was not additional and that the design document contained shockingly misleading statements which denied there would be any negative impact on the environment<sup>17</sup>. Again, despite these serious allegations the validators requested registration in October 2006 and the project has now been approved.

**Reduction of flaring and use of recovered gas for methanol production****Host:** Equatorial Guinea    **Status:** requesting registration    **Type:** fugitive**ktCO<sub>2</sub> per year:** 2263    **Years:** 10**Concerns raised:** lack of satisfactory stakeholder consultation, project is not additional.

Concerns about this project were again raised at the validation stage but were summarily dismissed by the validators. WWF-UK has since requested that this project be reviewed<sup>18</sup>. In

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<sup>15</sup> [www.irn.org/programs/greenhouse/index.php?id=050823xiaogushan.html](http://www.irn.org/programs/greenhouse/index.php?id=050823xiaogushan.html)

<sup>16</sup> “Letters to the editor: UN panel deceived over carbon credits” 13 February 2007  
<http://search.ft.com/ftArticle?queryText=un+panel+deceived+over+carbon+credits&aje=true&id=070213000683>

<sup>17</sup> [www.irn.org/programs/greenhouse/index.php?id=060711himanshu.html](http://www.irn.org/programs/greenhouse/index.php?id=060711himanshu.html)

<sup>18</sup> WWF-UK has not in the past submitted comments on particular CDM projects largely due to capacity constraints. However, we felt it appropriate in this case due to the large volume of CERs it is requesting (2.3 million per year over a 10 year period) and in particular over concerns that it may not be additional.



addition to our appeal four Executive Board members have also requested a review and we understand that this will be given consideration at the next board meeting on 20 to 22<sup>nd</sup> June.

#### **Misplaced investment?**

Another concern is that at present the CDM is dominated by cheap, numerous credits generated from projects to reduce industrial greenhouse gases such as the potent HFC-23. The argument is often put forward that such industrial gas projects are the “low hanging fruit” which offer quick, cheap, emissions abatement opportunities that will in the long run be replaced by the more expensive renewable energy and energy efficiency projects. However, the recent extension of the crediting period of the HFC-23 Shangdong project in China by 14 years (to 2028), multiplying the number of credits it can sell by 200%<sup>19</sup>, may pave the way for other projects to do the same.

Until credits from these projects run out they will continue to divert funds away from tackling the real challenge – the drive towards a low carbon energy system. Indeed a recent article in Nature<sup>20</sup> indicated that it would cost around €100 million to install scrubbers onto the existing factories producing HFC-23 in the developing world. Yet the same factories look set to make €4.7 billion from the sale of credits into the carbon market - funds which could have been much better spent in assisting the rapidly industrialising countries develop along a lower carbon pathway, and giving access to energy to some of the world's poorest people.

#### THE CDM PROJECT PIPELINE

As of May 2007 there were more than 2000 CDM projects in the pipeline and of these:

- 685 had been registered
- 1212 were at the validation stage; and
- 125 were in the process of registration<sup>21</sup>.

The sheer volume of projects seeking validation has risen from between 7 and 8 per month during January to March 2005 (the start of the first phase of the ETS), to 81 to 147 per month in the first quarter of 2007<sup>22</sup>. The examples of poor projects given in this report are likely the tip of the iceberg but in the absence of a dedicated independent organisation, individual NGOs simply lack the capacity and resources to police this process and their comments on individual projects, as highlighted (particularly at the validation stage), often seem to be ignored.

#### CONCLUSIONS

Considering the large proportion of emissions reductions that could take place beyond the borders of the EU during phase II we question the robustness of the formula applied by the Commission in assessing Member States compliance with the supplementarity principle.

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<sup>19</sup> “Extending CDM crediting period could threaten developing nation targets: analyst” Point Carbon, 23 May 2007

<sup>20</sup> Nature, volume 44518, February 2007 “*Is the global carbon market working?*”

<sup>21</sup> <http://www.cd4cdm.org/publications/CDMpipeline.xls>

<sup>22</sup> Ibid

Importing credits could make it cheaper for EU industry to reduce emissions. But access to significant volumes of credits from overseas as now seems likely in phase II could disincentivise investment in clean technology development in these sectors in the EU and slow down innovation. Crucially, it could help to “lock in” decisions on high-carbon infrastructure which will have a significant impact on EU emissions for many years to come.

The developed world is responsible for the majority of greenhouse gas emissions. If the EU is to maintain its status as a major player in global climate change negotiations then it must put its own back yard in order first and ensure that Europe is placed firmly on a path towards a low carbon economy. The ETS will not contribute towards achieving this if it continues to transfer most of the responsibility for tackling climate change to the developing world and allow the sectors within the scheme to simply buy their way out of the problem.

In combination with concerns over additionality - the decisions to allow access to large volumes of credits also raises serious questions about the extent to which the ETS will deliver significant emissions reductions during phase II.

#### RECOMMENDATIONS FOR THE REVIEW OF THE EU ETS

The review of the scheme is currently underway with a draft revised draft Directive expected towards the end of 2007. The review offers a vital opportunity to rectify the short comings of the scheme and ensure that the traded sector really starts to play its fair share in reducing emissions post 2012. The following recommendations should be given full consideration:

- The principle of supplementarity should be retained in full in the Directive and clearly defined such that the overwhelming majority of emissions reductions (significantly more than 50% of the overall effort required) required by the ETS are achieved within the EU. The principle should be made operational by clear rules and a harmonised approach across the EU.
- To ensure that projects really are additional, have a positive sustainable development impact, and contribute towards a drive towards a low carbon economy the use of project credits within the EU ETS should be limited to those certified by the Gold Standard<sup>23</sup>. The Gold Standard is an independent, transparent, internationally recognised benchmark for “high quality” carbon offset projects. It is restricted to renewable energy and end use efficiency projects, requires projects follow a conservative interpretation of the UNFCCC-additionality test and to provide evidence by a UNFCCC-accredited independent third party that they are making a real contribution to sustainable development.

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<sup>23</sup> <http://www.cdmgoldstandard.org>

## ANNEX I

Calculation of percentage of emissions reductions that could potentially take place outside the EU in phase II of the EU ETS

	Phase II cap (MtCO <sub>2</sub> per annum)	Max. allowed access to CDM/JI (%)	Max. allowed access to CDM/JI (MtCO <sub>2</sub> per annum)	Official BAU projections of ETS sectors from draft NAPs (MtCO <sub>2</sub> per annum) <sup>24</sup>	Calculated BAU projections (based on PRIMES 05) (MtCO <sub>2</sub> per annum) <sup>25</sup>	Phase II cap minus official BAU (level of effort) MtCO <sub>2</sub> per annum	Phase II cap minus calculated BAU (level of effort) MtCO <sub>2</sub> per annum	Calculation of percentage of emissions reductions that could potentially take place outside the EU	
								Based on official BAU from NAPs (%)	Based on PRIMES (%)
France	132.80	13.50	17.93	158.00	138.00	-25.20	-5.20	71.14	344.77
Germany	453.10	20.00	90.62	487.00	456.00	-33.90	-2.90	267.32	3124.83
Ireland	21.15	21.90	4.63	26.00	22.00	-4.85	-0.85	95.50	544.92
Italy	195.80	15.00	29.37	242.00	233.00	-46.20	-37.20	63.57	78.95
Netherlands	85.80	10.00	8.58	101.00	94.00	-15.20	-8.20	56.45	104.63
Poland	208.50	10.00	28.85	280.00	215.00	-71.50	-6.50	29.16	320.77

<sup>24</sup> As given in Ecofys, November 2006 [http://www.wwf.org.uk/filelibrary/pdf/ecofys\\_271006\\_report.pdf](http://www.wwf.org.uk/filelibrary/pdf/ecofys_271006_report.pdf). Note: Germany does not provide national or ETS sector BAU figures in the NAP. The "official" BAU figure was therefore calculated separately using national CO<sub>2</sub> projections for 2010 from the fourth National Communication (submitted to UNFCCC 19 October 2006) and the projected share of national CO<sub>2</sub> emissions that the EU ETS sector accounts for from NAP II.

<sup>25</sup> Ibid.

<b>Portugal<sup>26</sup></b>	<b>33.90</b>	<b>15.00</b>	<b>5.09</b>	<b>37.00</b>	<b>40.00</b>	<b>-3.10</b>	<b>-6.10</b>	<b>164.03</b>	<b>83.36</b>
<b>Spain</b>	<b>152.30</b>	<b>20.00</b>	<b>30.46</b>	<b>180.00</b>	<b>187.00</b>	<b>-27.70</b>	<b>-34.70</b>	<b>109.96</b>	<b>87.78</b>
<b>UK</b>	<b>246.20</b>	<b>8.00</b>	<b>19.70</b>	<b>276.00</b>	<b>289.00</b>	<b>-29.80</b>	<b>-42.80</b>	<b>66.09</b>	<b>46.02</b>
<b>Total</b>	<b>1529.55</b>		<b>227.22</b>	<b>1787.00</b>	<b>1674.00</b>	<b>-257.45</b>	<b>-144.45</b>	<b>88.26</b>	<b>157.30</b>

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<sup>26</sup> Portugal's NAP has not yet been ruled on by the EC. The figures given here for the cap and maximum access to CDM/JI credits are based on an estimate by New Carbon Finance & Dresdner Kleinwort Equity research from November 2006 who applied the same methodology that is being used by the EC to assess compliance with supplementarity.