



# Global Greenhouse Emissions



## T R A D E R

A quarterly newsletter dedicated to greenhouse gas emissions trading

### Editorial

Viewed from the bottom up, emissions trading is alive and well, despite the apparent pull-out of the USA from the Kyoto Protocol. On 17 April, The Netherlands through its Emission Reduction Unit Procurement Tender (ERUPT), purchased NLG 79 million (US\$32 million) worth of emission reductions, including the procurement of more than 4 Mtons of reductions in CO<sub>2</sub> emissions in 5 years (about 0.8 Mton per year.) The reductions will be realized through a 60 megawatt wind-power park in Poland, a hydro-power plant in Romania, a series of biomass-fuelled boilers in the Czech Republic and two urban heating projects in Romania.

As the articles in this issue show, emission trading systems are being developed nationally, commercially and internationally:

- National systems are being established in Denmark, Norway, United Kingdom, Australia, Netherlands and France to mention a few.
- Organization-wide trading systems are being implemented in Shell, BP-Amoco etc.
- The EC is considering a European emission trading system.
- IETA Members are looking at how these systems might be linked.
- System components to facilitate the trading of emission reductions are developing at a rapid pace, mostly by the private sector. As illustrated by the articles on the Emissions Market Development Group and the Chicago Climate Exchange, components to facilitate trading of greenhouse gas (GHG) reductions such as exchanges, banks and currencies are being developed and tested.

Trading systems are increasing in number and their coverage of emission sources. Stakeholders who are taking an early move to address climate change through emissions trading are also on the increase, as is the amount of resources and GHG emissions they

represent. There is growing recognition that setting caps on GHG emissions is inevitable and simply a question of time. Therefore, being ready to participate in the trading of allowances and credits becomes essential, even in light of the stalemate in intergovernmental talks. Few doubt that trading is the optimal mechanism to complement and propel domestic regulatory policy.

Viewed from the top down, the US position on the Kyoto Protocol creates uncertainties for the emerging GHG emissions market. But, as shown by the activities and initiatives being undertaken by actors whose emissions will be affected, the uncertainties may relate more to the timing and magnitude of the GHG market rather than to the market's existence and feasibility. For early movers, this may delay plans but not their enthusiasm and perception of opportunity.

However the politics of Kyoto are settled, it is clear that there will have to be an *emissions gap*<sup>1</sup> between what is emitted domestically and what the global climate system might tolerate. The issues at stake during the ongoing negotiations are questions of how big those gaps are and when they might be recognized and addressed. Until a better proposal is put on the table, and now that the economics of reducing emissions has become the deal breaker, the question of how those emissions gaps will be met will certainly involve the trading of allowances and credits.

### In the upcoming issue:

- **Economic modelling**  
by Laurent Vigui er, MIT
- **Emissions trading regime**  
by Richard Baron, IEA

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<sup>1</sup> Michael Grubb and Farhana Yamin, *Climatic collapse at The Hague: what happened, why, and where do we go from here?* International Affairs 77, 2 (2001) 273.



## EU supports emissions trading schemes

By Peter Vis, Principal Administrator, Climate Change Unit, European Commission

We Europeans have come along way with respect to the so called 'Kyoto mechanisms' since the Protocol was agreed at the third session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. The Protocol has indeed been the catalyst that started the emissions trading ball rolling in Europe.

It is absolutely right that GHG emissions trading is moving ahead steadily within the European Union. In fact, the EU is now further ahead with implementing the flexible mechanisms than the United States, at whose insistence such mechanisms were included in the Kyoto Protocol.

As well as learning about how GHG emissions trading would work in practice within the rather particular context of the European Union, the Commission's experts are very much focused on fuelling an informed debate on the subject throughout Europe and even beyond. Apart from the Green Paper on GHG emissions trading itself, this has involved our participation in numerous conferences and workshops on the subject within the past 18 months. The Japanese authorities have confirmed that the Commission's Green Paper has been translated into Japanese in order to serve as one of the inputs into discussions that are going on

within Japan. What is remarkable about working on such a new instrument, is that everyone is learning together. The first pilot schemes are coming into place—Denmark was first—and we must all be ready to learn from these experiences.

Emissions trading is an instrument that many people in Europe have grown to understand much better in recent years. It is an instrument that needs to be tried. If it delivers the expected results, it will be trusted as well. I sincerely hope that there is no going back now.

For more information, please contact: Peter Vis, European Commission, E-mail: peter.vis@cec.eu.int

## GHG Emissions Trading in the EU

By: Jürgen Lefevere, Staff Lawyer, FIELD

In international negotiations the EU is often perceived to be anti-emissions trading. It may then come as a surprise that work to introduce this instrument within the Community is well advanced. Europe-wide interest in emissions trading began in earnest in March 2000 when the European Commission issued its Green Paper on Emissions Trading, in which it announced its intention to have an EU GHG emissions trading regime up and running by 2005 and set out some of its basic design principles.<sup>2</sup> The Green Paper, based on a study led by the Foundation for International Environmental Law and Development (FIELD) in cooperation with the US-based Centre for Clean Air Policy (CCAP), sparked a growing Community-wide interest in the instrument. Two EU countries, Denmark and the UK, are close to, or already have in place, pilot forms of emissions trading. The call for reactions to the European Commission's Green Paper yielded almost 100 submissions from various stakeholders and interest groups, the vast majority of these reactions welcoming the introduction of an EU-wide regime. As a result, the Commission has reaffirmed the central role of emissions trading in the Community's climate change

strategy in the recently published proposal for a 6th Environment Action Programme.

Work on an EU GHG emissions trading regime has been advancing steadily since the publication of the Green Paper and FIELD is playing a central role in the development of this instrument in the European context. Emissions trading has been one of the key topics in the Commission's multi-stakeholder consultation under the European Climate Change Programme (ECCP) attended by FIELD. Working Group I (flexible mechanisms) of the ECCP programme has held monthly meetings since July 2000, discussing fundamental design questions relating to an EU GHG emissions trading regime on the basis of background documents drafted by the Commission. The ECCP process will end in May and its results will be discussed on the ECCP conference, organized by the Institute for European Environmental Policy (IEEP) in cooperation with FIELD and VERTIC. The ECCP conference is planned to take place in June or July 2001.

In parallel to the ECCP discussions, the Commission has requested a number of studies on key aspects of the emissions trading regime. CCAP, in cooperation with

TNO and FIELD, is carrying out a study on the monitoring, reporting and verification of single-source emissions necessary for an emissions trading regime. Other studies are examining issues relating to sectoral coverage and allocation formula. These will feed into the next phase of the work being undertaken by FIELD, with help from IEEP, which is to design a policy framework for an EU emissions trading regime.

The results of these various studies and the ECCP consultations will be drawn together by the EU Commission to constitute the next step in the development of the trading regime, which may be either in the form of a white paper or even a concrete legislative proposal. Depending on the outcome and timing of the resumed COP-6, the Commission is likely to announce these next steps together with the publication of its Kyoto Protocol ratification strategy in Autumn this year. Watch this space!

For more information, please visit: [www.field.org](http://www.field.org) or <http://europa.eu.int/comm/environment>, or contact: Jürgen Lefevere: [jl44@soas.ac.uk](mailto:jl44@soas.ac.uk) or Farhana Yamin: [fy1@soas.ac.uk](mailto:fy1@soas.ac.uk)

<sup>2</sup> European Commission Green Paper on Greenhouse Gas Emissions Trading within the European Union, COM(2000)87 of 8 March 2000.



## The International Emissions Trading Association (IETA) looks at the integration of national emissions trading schemes *By Andrei Marcu, Executive Director, IETA*

### Background

Currently, a number of national GHG trading schemes are emerging. As emissions trading schemes evolve at a national level, it will be recognized that a consistent international trading regime must be developed in order to encompass the need for bi-lateral and multi-lateral trading. IETA brings together a number of key private sector actors from across the globe that are interested in the establishment of an international framework for emissions trading, consistent across national borders.

As IETA members agreed that this subject was of great importance, and required further discussion among stakeholders, the IETA Annual General Meeting, held in November 2000, approved further work on this issue by the Association.

A Working Group was thus formed with the responsibility to:

- define the main elements of an emissions trading system and help to achieve common understanding on their definitions;

- analyse the processes best used for integration of national trading schemes;
- provide input to the international debate, through publications, submissions as well as a presence in events.

### Activities of the IETA Working Group

An initial meeting for the IETA working group on Integration of National Emissions Trading Schemes took place in Paris from 20–21 March 2001 and was hosted by Lafarge. This initial meeting served as a brainstorming session and formal starting point for IETA to further contribute to the international debate and provide input in this area.

### The IETA Working Group moving ahead in Paris

The workshop was successful in developing common ground between stakeholders and that participants were among the world's most knowledgeable practitioners in the field.

As a follow-up, IETA members, together with other stakeholders have formed a number of subcommittees that will examine the following topics:

1. who can deliver the building blocks of an emissions trading system (global, national, regional levels or the private sector);
2. how to achieve comfort and confidence in the GHG trading system;
3. scenarios for achieving international trading in GHG; and
4. implications for monitoring, verification and reporting from integration of national trading schemes.

First results of the work undertaken by these subcommittees will be reported in a special event at COP-6 bis.

IETA members, being committed to the creation of a global market in GHG emissions, consistent across national boundaries, strongly favour the commonality of key elements among emerging national trading schemes prior to 2008, in order to foster valid trading between such systems.

## Leading group of companies launch Emissions Market Development Group (EMDG)

*By: Frank Joshua and James Lowen, Arthur Andersen, Emissions Trading Services*

### Rationale for the Emissions Market Development Group

Business and industry around the world are likely to be faced with greenhouse gas emission constraints over the coming years. The Kyoto Protocol, or similar international agreements, promises both risks and opportunities for companies.

The current lack of clarity on emissions trading rules makes it difficult for companies to efficiently manage exposure or benefit from business opportunities. This regulatory uncertainty is likely to remain for several years and will inhibit the ability of companies to undertake greenhouse gas emission reduction activities.

The **Emissions Market Development Group (EMDG)**—a joint initiative between Arthur Andersen, Credit

Lyonnais, Natsource and Swiss Re—aims to address this uncertainty. Launched at the Sixth Conference of the Parties to the UNFCCC in November 2000, the EDMG will:

- assist companies to manage their carbon position through the creation of a standardized tradeable carbon unit that will be exchangeable for compliance tools with guaranteed validity within specified jurisdictions and specified time frames (the **Carbon Repository**); and
- facilitate the exchange of ideas and experiences and promote understanding and confidence between public and private sector stakeholders in the new emissions markets (the **Open Forum**).

### Establishment of a Carbon Repository

The '**Carbon Repository**' aims to create a common tradeable carbon unit which will facilitate interchangeability between a diversity of emissions reduction products: e.g. Assigned Amount Units (AAUs), Emission Reduction Units (ERUs) and Certified Emission Reductions (CERs). By simplifying risks, definitions and other complexities, the Carbon Repository will produce a simple, universally-recognized carbon commodity.

The Repository will receive and evaluate emission reductions from a variety of sources, and subsequently issue an amount of 'Common Carbon Credits' (CCCs) that is relative to the quality of the emission reductions. This CCC will be guaranteed by the Repository as

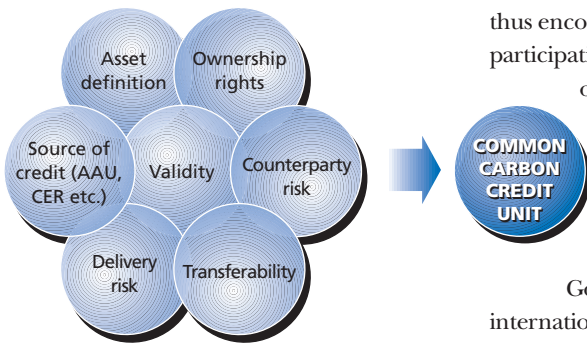


Figure 1: The Carbon Repository simplifies underlying complexities

exchangeable for a credit that will be usable by companies for compliance with greenhouse gas regulation that may exist in specified countries at specified dates. In practical terms, this means that an investor will be able to exchange Certified Emission Reductions (CERs) derived from a CDM project in China or Emission Reduction Units (ERUs) derived from a JI project in Russia, for example, for an appropriate number of CCCs. These CCCs could be traded freely. When the buyer at the end of the chain needs to use these CCCs to meet national commitments, the Repository will provide an equivalent number of units in a denomination acceptable to the destination country (e.g. German AAUs for Germany).

This guarantee of usability will generate and sustain the liquidity that is required to build an efficient greenhouse gas market—

thus encouraging private sector participation. The conversion mechanism of the Repository also provides an incentive for companies to maximize the quality of their emission reductions; the resulting 'gold standard' of CCCs seeks to increase Governments' confidence in the international acceptability of emission reductions purchased from other countries.

The Carbon Repository will be created by private sector participants in the EMDG. The EMDG has commissioned a feasibility study on a carbon repository and related trading platform. Membership of the 'Carbon Repository Feasibility Group' will be restricted to major emitters in the short term; financial institutions will be invited to join later if the Repository is determined to be feasible. To date, 35 major emitters have participated in early concept meetings.

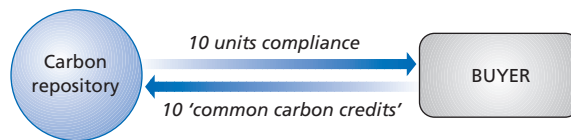


Figure 2: Using CCCs to contribute to compliance

**Establishment of an Open Forum**

The second facet of the EMDG is an Open Forum. Via this mechanism the EMDG will build a partnership between key emitters, Governments and civil society in order to facilitate early and

effective development of the carbon emissions market.

The **Open Forum** aims to provide a unique opportunity for a multi-stakeholder dialogue to share ideas and experiences between the EMDG's Carbon Repository Feasibility Group and key public sector actors (e.g. interested Governments, multilateral financial institutions, and relevant NGOs). The Open Forum will focus on understanding the role and function of key elements of the emissions trading infrastructure that are essential to the successful operation of the Carbon Repository that contributes to the success of national Greenhouse Gas trading systems and the wider international emissions trading market.

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**Chicago Climate Exchange<sup>sm</sup> moves toward launch**

By Michael Walsh, Rafael Marques and Scott Baron, Environmental Financial Products LLC

The preparation of a voluntary pilot market to reduce greenhouse gases (GHG) in North America is under way. Development of the initiative, called the Chicago Climate Exchange<sup>sm</sup> (CCX), is being funded by the Chicago-based Joyce Foundation through Northwestern University. Following recent completion of

a feasibility study and implementation plan by Environmental Financial Products LLC, the programme is now moving to launch.

The pilot market will blend a cap-and-trade allowance system with offsets from individual mitigation projects, including projects undertaken in Brazil. The goals of the programme are:

- **proof of concept:** blending emission allowances with offsets from diverse sectors and projects;
- **price discovery:** revelation of a meaningful indication of greenhouse gas mitigation costs; and
- **build effective institutions** and standardized procedures so that any

public policy can be implemented with minimum transaction cost.

The pilot market will be initiated in seven US Midwestern states (Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio and Wisconsin), and then expanded throughout the USA, Canada and Mexico. The Midwest region is the focus of the Joyce Foundation, and also represents an attractive place to start. It offers a diverse base of manufacturing, transport, energy, agriculture, and forestry firms. With 20 per cent of the US population, economy and GHG emissions, its 1999 GHG emissions of 1,375 million metric tons CO<sub>2</sub> equivalent exceeds that of the UK and France combined (see figure below).

The guiding principles of the CCX are to incorporate features of other successful commodity and environmental markets, to start small and grow over time, and to simplify the process of crediting individual mitigation projects. Even on a modest scale, the CCX can create a robust market that allows participants to achieve real reductions in greenhouse gases through a wide range of mitigation options.

**Market architecture**

The architecture of the pilot market includes the core elements that have achieved international consensus. The market will combine the emissions budget approach (analogous to ‘assigned amounts’), with offsets from individual emission reduction and sequestration projects. All six greenhouse gases will be included.

Emission sources in the seven-state region will be eligible for participation in Phase I of the programme. Mitigation commitments are proposed for 2002, and trading is expected to begin early that year. Phase II begins in 2003 and will include emission sources from the USA, Canada and Mexico. International linkages with other markets, such as the UK and Norway programmes, can be initiated in Phase III.

The CCX Registry will record actual emissions, track allowances, offsets, and trading activity and will be used to assess

compliance. Emissions monitoring and project verification protocols, as well as standardized trade documentation, have been prepared for review by industry.

During 2002 the emission reduction target is 2 per cent below 1999 levels. The target will decline a further 1 per cent per year below 1999 levels in 2003, 2004 and 2005, resulting in a final objective of reducing net emissions to 5 per cent below 1999 levels during 2005. Allowances equal to the annual targeted emission level will be distributed. Each year, participating emission sources must relinquish allowances and offsets in an amount equal to their emissions. Emissions sources that have emitted more tons of CO<sub>2</sub>-equivalent emissions than the allowances they hold may purchase offsets or allowances from other companies to achieve compliance.

Similar to CDM and JI, offsets can be generated by a variety of GHG reduction and sequestration projects. This feature will encourage low-cost mitigation efforts by individual landowners and small businesses. A number of design features applied to the offset component are intended to overcome the high transaction costs and uncertainties associated with most emission credit programmes. This strategy includes use of conservative standard formulae when possible. In order to help keep per-unit transaction costs low, aggregated offset pools are to be formed. A number of natural offset aggregators, such as agricultural cooperatives and

insurance companies, have signaled their interest in performing this function.

Some examples of eligible offset projects include:

- landfill, coalbed, agricultural methane recovery;
- carbon sequestration in forests and agricultural soils; and
- renewable energy systems, including solar, wind and geothermal.

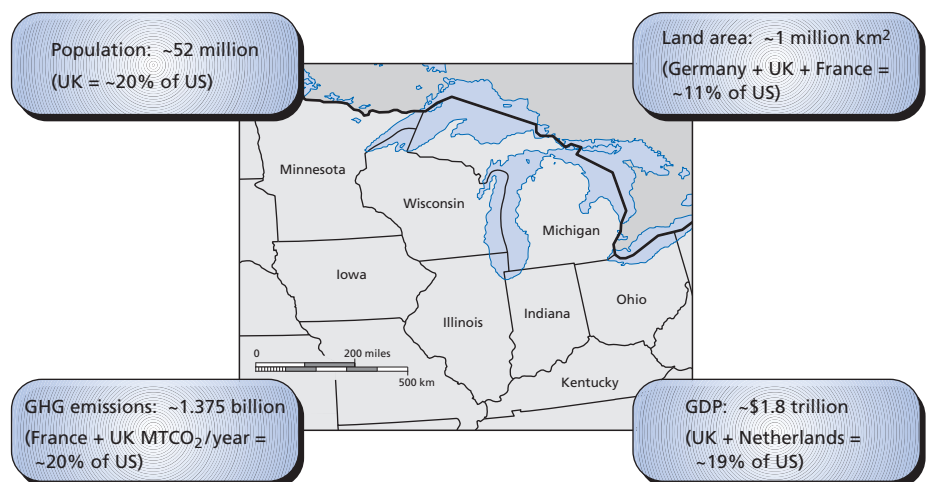
**Benefits to participants**

The CCX is designed to give North American industry the features it has sought in a GHG reduction programme. It is voluntary, market-based and provides broad latitude to use multiple mitigation options. It slowly phases in reductions on a schedule that will position participants to benefit from trading programmes likely to emerge during the next decade.

Participants can gain early-mover advantages by:

- reducing long-term GHG mitigation costs;
- establishing greenhouse gas management and trading skills;
- increasing financial returns to climate-friendly technologies and management practices;
- developing practical expertise needed to influence the design of future GHG regulations; and
- enhancing their environmental reputation among stockholders, customers, and employees.

Figure 1: Characteristics of the Midwestern United States





A high-level Advisory Board has been formed to provide strategic input. Members of the Board include internationally recognized environmental leaders, former US Senators and Governors, and individuals who have served in senior positions in major businesses and academic institutions. Representatives of industrial emission sources and offset projects will join a Technical Committee that will help refine

the proposed market design and rules. Formal indications of interest have been received from a considerable number of leading energy, manufacturing, forestry, financial and agricultural entities.

The development of the Chicago Climate Exchange<sup>sm</sup> is intended to prove the viability of a GHG emissions trading programme that employs a diversified portfolio of mitigation options. There is no substitute for direct

experience with emissions trading. As such experience is accumulated by participants in the CCX market and other GHG markets now being formed, superior market-based solutions to climate change can be developed and integrated around the world.

For more information, please contact: Michael Walsh: mwash@envifi.com or visit the web site at: www.envifi.com

### Useful websites

In every issue we allocate a corner to inform our readership about interesting websites. The featured websites for this issue are:

- www.airquality.about.com
- www.cicero.uio.no
- www.climate.kz
- www.climnet.org
- www.climatevoice.com
- www.coolaction.com
- www.detr.gov.uk
- www.energy.gov
- www.environicsinternational.com
- www.environment-agency.gov.uk
- www.fao.org/sd/ENdef\_en.htm
- www.globalenvironmentfund.com
- www.greenerandcleaner.org
- www.grida.no
- www.iea.org/envissu/emis.htm
- www.ieep.org.uk
- www.localpower.org
- www.noaa.gov
- www.o2exchange.com
- www.safeclimate.net
- www.uketg.com
- www.usgcrp.gov

If you would like to post your website please send us an email at ghgmissionstrading@unctad.org.

### What's new ...

#### Future directions

UNCTAD has been focusing on expanding knowledge and dialogue on emissions trading in its broader sense through research, publications, workshops and policy fora. In the immediate future, in response to increasing requests from Member States, UNCTAD is considering enhancing its capacity-building functions in the area of trading of allowances and credits.

Following the priorities set at the Regional Workshop on GHG Emissions Trading for Countries with economies in transition (EIT) in Moscow (Sept. 1999), UNCTAD is considering the development of a capacity-building project that will combine support for national inventory systems and the establishment of National Emissions Trading Systems (NETS) in EIT countries. Likewise, following discussions on capacity-building at the climate change negotiations, UNCTAD and its project partners are exploring interest shown in a capacity-building project to promote the establishment of National Emissions Trading Authorities (NETAs) in developing countries. The NETAs are envisaged to facilitate investments in projects that will result in emission reduction credits that can be traded in emerging national emission trading systems.

#### Upcoming Events

The events currently being planned are as follows:

- August: The 5th Session of the UNCTAD/Earth Council Policy Forum, Rio de Janeiro, Brazil, 29–31 August 2001.
- September: Regional Workshop for Economies in Transition.

#### Publications

- A new report is being published entitled 'Greenhouse Gas Market Perspectives: Trade and Investment Implications of the Climate Change Regime'. *Recent research on institutional and economic aspects of carbon trading.*
- The July issue of the newsletter will feature work on the IEA, Economic Modelling, the upcoming Policy Forum meeting in Rio de Janeiro meeting and the EIT Workshop.

### Global Greenhouse Emissions

#### T R A D E R

can be obtained free of charge from:

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