



# Linking in the EU ETS Bulletin

Seminar on Linking the Kyoto Project-Based Mechanisms with the European Union Emissions Trading Scheme (EU ETS)

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## SUMMARY OF THE SEMINAR ON LINKING THE KYOTO PROJECT-BASED MECHANISMS WITH THE EUROPEAN UNION EMISSIONS TRADING SCHEME: 15-16 SEPTEMBER 2005

The Seminar on Linking the Kyoto Project-Based Mechanisms with the European Union Emissions Trading Scheme (EU ETS) took place from 15-16 September 2005, in Vienna, Austria. The Seminar was organized by the United Nations Industrial Development Organization (UNIDO), in cooperation with UK Trade and Investment and the Government of Hungary. The seminar was convened to provide a forum for business and industry to advance their understanding of emissions trading within the EU and its linkages with the project-based mechanisms of the UN Framework Convention on Climate Change's Kyoto Protocol, namely Joint Implementation (JI) and the Clean Development Mechanism (CDM).

The two-day event featured 40 speakers and more than 200 participants, with panel presentations followed by question-and-answer sessions, and included representatives of governments, business, industry, international and intergovernmental organizations, academia, research institutes and non-governmental organizations.

The sessions explored the current state of the EU carbon market and the possibility for linkages with JI and CDM. Key issues addressed include the status and prospects of EU ETS from regulatory and market perspectives including options and strategies to meet compliance obligations; the status of the EU market infrastructure, including monitoring and reporting, registries, transaction logs, and trading exchanges; and perspectives for the post-2008 period.

The seminar provided a valuable networking and knowledge-sharing opportunity for business, industry, government experts and other stakeholders involved in the implementation of the EU ETS, in emission trading and in the project-based mechanisms of the Kyoto Protocol.

### A BRIEF HISTORY OF THE KYOTO PROTOCOL AND THE EU ETS

The international political response to climate change was formalized with the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, which created a framework for action aimed at stabilizing atmospheric

concentrations of greenhouse gases (GHG). The gases controlled by the UNFCCC include methane, nitrous oxide, and, in particular, carbon dioxide. The UNFCCC entered into force on 21 March 1994 and currently has 189 Parties.

The Kyoto Protocol was finalized in December 1997 in Kyoto, Japan, when Parties to the UNFCCC agreed that developed countries and countries with economies in transition to a market economy were to reduce their overall emissions of six greenhouse gases by at least 5% below 1990 levels between 2008 and 2012, with specific targets varying from country to country. The Protocol entered into force on 16 February 2005 and has 155 Parties, including 35 Parties that account for 61.6% of the total carbon dioxide emissions subject to reduction targets.

In an effort to ensure collective compliance by all EU member States, the EU created its own cap-and-trade emission reduction system in 2003 (Directive 2003/87/EC). The EU ETS commenced operations in January 2005 becoming the largest GHG emission trading scheme currently operating. The scheme is based on the allocation of GHG emission allowances (EUAs), which may be traded, to specific industrial sectors through national allocation plans (NAPs) with oversight by the European Commission (EC). NAPs set out the overall emissions cap for the country and the allowances that each sector and individual installation covered under the Directive receives. These NAPs need to comply with criteria contained in Annex II of the Directive.

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The first phase of the EU ETS covers the period 2005-2007, while the second phase coincides with the Kyoto Protocol's first commitment period, from 2008 to 2012. The first phase of the EU ETS applies to some 7,300 companies and 12,000 installations in six major industrial sectors across the enlarged EU. These industrial sectors include: utility combustion plants; oil refineries; coke ovens iron and steel plants; energy-intensive industry, such as cement, glass, lime, brick and ceramics production facilities; and the pulp and paper industries.

The trading system allows emitters who reduce emissions beyond their obligations to save unused allocations for future use or sell them to other companies that need a cost effective way of achieving their emission reduction targets.

### ***THE KYOTO PROTOCOL'S FLEXIBILITY MECHANISMS***

The Kyoto Protocol establishes three flexible mechanisms to assist those countries with emission reduction targets (known as Annex I Parties) in meeting their obligations cost-effectively: an emissions trading system which will become operational in 2008 (Article 17) and two project-based mechanisms, Joint Implementation (JI) (Article 6) and the Clean Development Mechanism (CDM) (Article 12).

JI allows Annex I Parties to implement emission reduction projects (e.g. an energy efficiency scheme) or projects that increase GHG removal by sinks (e.g. a reforestation project) in the territory of another Annex I Party, and count the resulting emission reduction units (ERUs) against its own target. In practice, JI projects are most likely to take place in countries with economies in transition, where there tends to be more scope for cutting emissions at low cost. Projects starting from the year 2000 may be listed as JI projects, although ERUs may only be issued in relation to commitment periods from 2008 onwards. There are two possible procedures for carrying out a JI project. The first procedure (often called Track One) applies when the Annex I Party hosting the project meets the eligibility requirements to participate in the mechanism. The second procedure (Track Two) applies when the host Party does not meet all eligibility requirements and requires a specific verification process to determine the quantity of ERUs the project generates.

The CDM allows Annex I Parties to implement projects that reduce emissions in any developing country and use the resulting certified emission reductions (CERs) to help meet their own targets. The issuance of the first CERs delivered by four CDM projects is expected in the coming weeks.

### ***LINKING JI AND CDM TO THE EU ETS***

The EU's "Linking Directive" (Directive 2004/101/EC) creates the conditions to use credits generated by emission reduction projects certified by the Kyoto Protocol within the EU ETS market. It allows member States who obtain such credits to convert them into allowances and use or trade them within the EU ETS.

In order to prevent an excessive amount of Kyoto-originated credits from entering the system, the Linking Directive excludes

forestry-related projects and provides for a review in the event that JI and CDM project credits equivalent to 6% of the total quantity of allowances issued for the 2008-2012 trading period enter the EU ETS.

## **REPORT OF THE SEMINAR**

### ***OPENING SESSION***

On Thursday morning, Ali Cahit Gurkok, UNIDO, welcomed participants and thanked the governments of Hungary and the United Kingdom (UK) for their contributions to organizing the event. He emphasized UNIDO's unique mandate to assist industry for growth and development, including emission trading. He said that with the Kyoto Protocol's entry into force, the carbon market is expanding substantially and encouraged participants to discuss, among others key areas of the EU ETS: the review of national allocation plans (NAPs); linking the EU ETS with the CDM and JI; and carbon management, including monitoring, transaction logs, and overview of the GHG emissions market.

Györgyi Martin Zanathy, Hungarian Ambassador to Austria, highlighted that climate change should be addressed globally and hoped that the seminar would involve some friendly and open discussions on ways to achieve the common goal of reducing global GHG emissions.

John Macgregor, UK's Ambassador to Austria, hoped that the seminar would highlight every aspect of the EU ETS. He noted that the UK set up the world's first emission trading commission, and its operation is now in smooth transition into the EU ETS. With the UK chairing both the G8 and the EU's Council in 2005, he said his country is making efforts to achieve consensus among EU countries on climate change issues.

Concluding the opening statements, Marina Ploutakhina, introduced the agenda and organization of the meeting, noting that all presentations will be posted on the UNIDO website (<http://www.unido.org/en/doc/38110>).

### ***DAY ONE: REGULATION AND INFRASTRUCTURE: HOW LINKED AND READY TO TRADE IS THE EU ETS?***

#### ***WHAT IS THE STATUS OF REGULATORY IMPLEMENTATION?***

Bill Kyte, UK Emissions Trading Group, chaired the panel session on regulatory implementation and highlighted the opportunities for investment in new EU member States.

Jürgen Salay, EC, presented the EU ETS, focusing on the experience gained in implementing the first commitment period (2005-2007). He highlighted: the EC's approval of all 25 NAPs; an increasing number of electronic registries available online; and over half of 2005 allowances already being credited to companies. He also informed that the Linking Directive is in force, allowing for the linking of the EU ETS with the CDM as of 2005 and with JI as of 2008, with Guidelines on double counting expected by autumn 2005. Regarding next steps, he said the EC is expecting to receive from member States: verified emissions data for 2005 by March 2006; allowances equal to 2005 emissions by April

2006; and Phase II NAPs by June 2006. He also explained that the EC is conducting a review of the EU ETS's implementation in order to incorporate valuable lessons into the next commitment periods and to maintain its focus on ensuring compliance with the Kyoto Protocol's obligations.

Florentina Manea, Ministry of Environment and Water Management, Romania, gave a presentation on Romania's situation on GHG emission reductions. She introduced the country's carbon dioxide inventories for the period 1989-2005, showing that Romania will have significant emission reduction credits to offer. She highlighted that Romania has signed agreements with several Annex-I countries and approved JI projects amounting to 7.2 million tons of carbon dioxide focusing on energy efficiency, rehabilitation of district heating systems and recuperation of methane from urban landfills. She said Romania's implementation of the ETS and the Linking Directive is underway with full transposition expected by the end of 2005 and that her country is working on the preparation of the first and second NAPs and methodology for JI Track One.

Daniele Agostini, Ministry of Environment and Territory, Italy, said all plants participating in the EU ETS have been authorized in Italy and the transposition of the EU ETS Directive is underway with the Linking Directive expected to be operational by the end of 2005. He underscored the problems caused by the impact of the EU ETS on Italy's electric market due to the 1989 ban on nuclear energy production which increased Italy's reliance on fossil fuels. He also highlighted cultural changes needed at the government level and the need to address competition between sectors and electricity prices in NAPs. Finally, he explained that Italy will have a unified office for approval of both EU and Kyoto Protocol-related projects to ensure a seamless transition between systems and said they expect to use between 40-60 million tons of carbon dioxide credits every year.

Helena Princova, Ministry of Environment, Slovakia, reported that during the first ETS commitment period, the total aggregated GHG emission in the country has decreased by 20% and that 53 installations were removed. She said that problems faced during this period include lack of previous experiences and of engagement from the very beginning, inconsistent information on ETS among operators, and problems with input data and information for installations. In order to carry out the next phase of the NAP, she highlighted the urgent need for improvements in quality and data flow for installations and higher engagement by member States in the process of revision and harmonization of EU's legal framework for ETS.

Anna Paczosa, Ministry of Environment, Poland, explained that her country's NAP for 2005-2007 sets out the total quantity of allowances, total carbon dioxide emission needs, and the emission allocation between existing and new installations. She noted that according to the EC's decision to reduce its total amount of emission allowance by 16%, Poland has revised its NAP with new methodologies for particular groups of installations to determine baseline emission of carbon dioxide,

which include power plants, combined heat and power plants and others industries.

In the ensuing discussion, panelists outlined some of the major difficulties in linking the Kyoto Protocol's mechanisms with the EU ETS, including: the complexity of ETS; the limited volume of credit supply for use; and the problems faced in the implementation of national legislations and the Linking Directive. In response to a question about trading limits under the ETS, the EC said this would be up to the member States to decide. Regarding Kyoto Protocol mechanisms, while expressing optimism about the carbon market, Salay and Agostini also expressed concern over the budgetary constraints affecting the CDM Executive Board.

### ***REGULATORY ISSUES SURROUNDING THE USE OF THE LINKING DIRECTIVE TO MEET EU ETS COMPLIANCE REQUIREMENTS***

József Feiler, Ministry of Environment, Hungary, chaired the panel. He highlighted the challenges for new EU member States who are hosting JI projects and have to transpose the EU ETS and Linking Directives by the end of the year.

Ivona Grozeva, Ministry of Environment and Water, Bulgaria, gave a presentation on emission reduction credits in her country, stating that under the Kyoto Protocol, Bulgaria will have less surplus than originally predicted due to the closure of four nuclear facilities. She said Bulgaria prioritizes JI projects with 12 approved projects amounting to 10 million tons of carbon dioxide. She highlighted the limitations placed by the EU ETS on the scope of JI projects, as only six major industrial sectors fall under the EU ETS, and those may not be the sectors most interested in developing JI projects. Regarding direct double counting on JI projects, where equal number of allowances is cancelled from an operator's account, she highlighted that some facilities, depending on carbon market prices, may prefer to have the allowances rather than an automatic deduction.

Tomas Chmelik, Ministry of Environment, Czech Republic, emphasized the convenience of giving operators the largest amount of options possible, but cautioned that this may lead to complexity, lack of transparency, and monitoring deficiencies. He also questioned the convenience of approving new JI projects and setting aside allowances for them, considering the complications placed on the whole system and the limited administrative resources to handle these in new EU member States. Finally, he reflected on the likelihood of JI continuing beyond 2012.

Agnieszka Galan, Ministry of Environment, Poland, said five JI projects have already been approved which qualify for JI Track Two. She highlighted that direct double counting poses problems when installations reduce emissions elsewhere and said the focus should be placed on where reductions occur, rather than where projects take place. Finally, she emphasized the potential for GHG reductions in Poland, due to the existing emission reduction credit surplus and cost-effectiveness of investments.

Gertraud Wollansky, Ministry of Environment, Austria, said that as a buyer country, Austria's goal is to fill the gap between

national emissions and Kyoto targets with emission reduction units (ERUs) and CERs amounting to approximately 300 million Euro from 2003-2012. She noted that double-counting provisions in Linking Directives would limit use of JI in new EU member States due to practical difficulties primarily concerning indirect emission reductions in EU installations. She questioned that national offset projects are not necessarily helpful for countries to reach their Kyoto targets, because ERUs could be sold abroad instead of counting towards the national target.

Henk Sa, Ecomerits, UK, projected the availability of carbon credits from flexible mechanisms to amount to 530 million tons of carbon dioxide by the end of the first commitment period, with 30 million tons of carbon dioxide facing difficulties of getting into ETS due to the Linking Directive criteria. On the demand side, he noted that the gap for the EU-15 between the first commitment period target and their 2003 emissions is approximately 270 million tons of carbon dioxide. However, when taking into account the ERU and CER acquisition intentions of the EU member States, the gap is reduced substantially to 135 million tons of carbon dioxide. Regarding EU ETS market-related issues, he said that CERs can be banked between the first and second ETS commitment periods, and this property makes these credits especially valuable at the end of the first ETS commitment period.

Manfred Stockmayer, CAMCO International, cautioned that different approaches by countries towards JI project approval and the inclusion of gases other than carbon dioxide generate uncertainty and impact the market. He also raised concern over the effects that caps to JI and CDM credits or limitations to the number of gases may have on competition and new installations. He emphasized the value of coherence in guidelines and their interpretation.

Participants noted that efforts by some EU countries to limit the type of gases accepted and the percentage of Kyoto Protocol credits allowed within their NAPs were not useful since firms may overcome such restrictions by simply obtaining these allowances and swapping them with facilities in other countries. They also expressed doubts on the relevance of indirect double counting measures and highlighted opportunities for JI in non-EU ETS sectors.

#### ***CORPORATE DECISION-MAKING AND COMPLIANCE MANAGEMENT***

Jeff Chapman, UK Trade and Investment, chaired the panel. He highlighted the role of the private sector in the success of climate change policy.

Zoltán Demján, Slovak Cement & Lime Association, Slovakia, explained possible impacts of carbon dioxide trading on industry's competitiveness. He said one of the industry's concerns is that the price for carbon dioxide credits is the same for all players on the market but the impact on competitiveness is not. Another concern is that the EU ETS regulations allow carbon dioxide trade without proving emissions reductions, which encourages unfair competition among industry sectors. He

also introduced alternative fuels, especially thermal wastes, as sustainable solutions for further reduction of carbon dioxide in the cement industry.

Tim Atkinson, Natsource, UK, presented lessons learned from early trading approaches, highlighting: compliance (trading once a year to purchase any shortfall); frequent hedging (entering the market regularly to minimize price risk); speculation (trading to take advantage of price movements in the market); and project-based reductions (utilizing the EU allowance market to assist in the financing of internal projects and using CERs/ERUs to meet compliance). On market transactions, he said these are basically divided into three categories: emission allowance trade that functions like any commodity market; forward trade with terms agreed now and payment made on delivery; and immediate setting or spot market in which transfer is immediate.

Bill Thompson, British Petroleum, UK, spoke about issues in corporate carbon management from an industry perspective. He stressed the need to ensure compliance through reporting and monitoring, planning and updating, and having a trading strategy. In addition, he emphasized the importance of engaging employees in identifying reductions across installations and promoting collaboration and best practices.

Jay Mariyappan, Climate Change Projects Office, UK, underscored the rise in corporate interest in JI and CDM following the entry into force of the EU ETS and the Kyoto Protocol, and the ratification of the latter by the Russian Federation. He said firms tend to consider all options available and build a varied portfolio through brokers, carbon funds and project development. He also highlighted existing uncertainties regarding prices, NAP Phase II allocations, use of non-carbon dioxide gases, the reform of the CDM Executive Board and the lack of registered projects with issued CERs and ERUs.

Jutta Volmer, the Carbon Fund, Germany, introduced the Fund and its products saying that investors include oil utilities, banks and medium-sized companies and said the Fund's volume is 50 million Euro. She also mentioned that unilateral CDM projects are not included in the Fund's portfolio due to the uncertainty regarding their status.

In the ensuing discussion, participants commented on impacts of the EU ETS on the competitiveness of specific sectors such as steel. Some discussants said attention should be placed on market structures and profit margins, rather than on prices. Others noted that cement projects that burn waste have potential effects on the production of dioxins and furans covered by the Stockholm Convention on Persistent Organic Pollutants.

#### ***DAY TWO: MARKET INFRASTRUCTURE ON THE CORPORATE, TRADE/EXCHANGE AND REGULATORY LEVEL***

##### ***MONITORING, REPORTING, VERIFICATION AND ACCOUNTING: ISSUES AT INSTALLATION AND COMPANY LEVEL***

On Friday morning, panel chair Ingo Puhl, 500ppm, Germany, presented the speakers on the verification, monitoring and

reporting panel. He noted that they would address issues under the EU ETS, and CDM and JI projects.

Richard Gledhill, PricewaterhouseCoopers, introduced the situation of monitoring and verification in the EU ETS, highlighting a shortage of verifiers for the first quarter of 2006 and urging firms to plan ahead and select verifiers soon. He identified common problems such as data inconsistency, errors in calculations and lack of adequate documentation. He expressed concern about the differences in monitoring methodologies and formats for emissions and verification reports within Europe, calling for harmonization of verification, monitoring and reporting requirements, and a European-wide accreditation system for verifier companies.

Jochen Gross, SGS Climate Change Program, reported on monitoring and reporting of GHG within CDM and JI explaining that the guidelines used are those of the Intergovernmental Panel on Climate Change (IPCC) Good Practice Guidance for National Inventories. He highlighted problems faced, such as changes in the approved baseline and monitoring methodologies, lack of quality assurance and quality control criteria for the calibration and maintenance of instruments, and lack of parameters for estimating emissions when data is missing or corrupted. Finally, he suggested that firms should be proactive in preparing good monitoring reports regardless of approved methodology deficiencies.

Sussane Haefeli-Hestvik, Det Norske Veritas (DNV), Norway, highlighted that four projects are about to finish the CDM validation, procedure which will lead to the issuance of the first CERs. She noted that two projects have delivered fewer emission reductions than predicted in the Project Design Document (PDD), encouraging firms engaging in CDM or JI projects to fully consider the possibility that projects will deliver fewer CERs/ERUs than originally expected. The challenges that verifiers face, she explained, are to ensure consistency of monitoring methodologies, to correct miscalculations and errors in data entry, and to ensure that the management system complies with the monitoring plan.

Michael Rumberg, TÜV SÜD Group, Germany, presented three case studies in India, Czech Republic and Chile on monitoring, reporting and verification in JI and CDM. Problems observed during the initial and first periodic verification of these projects include: changes to the project design; little attention to environmental and social indicators; and failure to document routines and procedures in the management system. For future monitoring, reporting and verification, he underscored the need to consider: whether project implementation will follow original plans; to what extent the project may be changed; and how to deal with the loss of additionality due to project design changes.

Andras Juhasz, Deloitte Ltd., Hungary, explained how companies set up monitoring and verification systems. He said that the carbon dioxide monitoring system should meet EU ETS Decision criteria and be built and operated with the least costs possible. In building the system, the industry sector of the company and the source of carbon dioxide emissions are

significant factors to be considered. He concluded by highlighting that firm's adaptation of carbon dioxide emission monitoring systems and election of verifiers should be finalized as soon as possible to provide the basis for any EU ETS trading activity or internal carbon dioxide abatement projects.

Leszek Adamczyk, Atmoterm S.A., Poland, presented a case study on IT-supported instruments for carbon dioxide monitoring and reporting, identifying problems in IT solutions for monitoring, such as: limited number of installations with strict procedures for data management; inefficient organizational set-ups leading to unclear responsibilities and inconsistent data management systems; lack of final regulatory frameworks for internal systems; heavy reliance on national regulation rather than on EU guidelines; and unclear verification rules. In conclusion, he stressed the urgent need to complete the regulatory framework in Poland and the importance of high-quality, independent verification processes.

During the question-and-answer session, one participant explained that only ten verifiers had been selected in Slovakia, and they were individual Slovak citizens. Some participants commented on efforts underway to promote a European-wide recognition of verifiers. Many participants reflected on the "conservative" IPCC approach versus the principle of continual improvement in methodologies from the EU ETS, highlighting that the IPCC approach tends to result in emissions underestimation and less accurate results. They also commented on the causes of underachievement by CDM projects in terms of projected emission reductions saying that in some cases it was due to monitoring equipment problems, and in others it was due to the nature of the project, like landfills, where it is very hard to forecast emissions *ex ante*.

### **REGISTRIES AND TRANSACTION LOGS – INFORMATION EXCHANGE AND REPORTING**

Peter Pembleton, UNIDO, chaired the panel and highlighted the importance of information exchange and reporting.

Francois Dauphin, Logica CMG, discussed registry and transaction logs from an IT integrator's perspective. Having identified obstacles in information exchange and reporting for effective reduction of GHG, he said these had significant impacts on the carbon market. In order to overcome these problems and to implement both ETS and the Kyoto Protocol's mechanisms, he stressed the importance of: central program management and supervision; communication and facilitation of the schemes, including dissemination of information websites; and infrastructure funding.

Philip Metcalfe, Carbon Registry Services Ltd., UK, presented the details of managing an emission portfolio and transacting across multiple registries. He stressed the need for data management to know actual and forecasted emissions and to help companies develop compliance and trading strategies. He also emphasized the value of interacting with registries to learn how to access the market.

Helen Shore, Department for Environment Food and Rural Affairs, UK, spoke about allowances and units issued by national registries, CDM registry and Annex I Parties, including: EUAs, CERs, ERUs, assigned amount units (AAUs), and removal units (RMUs). She explained that entries in national registries will be sent to international transaction logs (ITL) for transfer.

Wolfgang Aubrunner, Emission Certificate Registry Austria (ECRA), explained the functioning of the Austrian registry system, emphasizing its functionality, user-friendliness, security standards and data-access rights. He also explained how allowances can be transferred to internal or external accounts and offered software solutions and cooperation to establish new registries in other countries.

Participants commented on security measures against hackers, volumes traded and number of accounts operating in different countries, and liability for errors in registered data. Panelists noted that registries should be available around the clock for consultation and encouraged operators to read the terms of service carefully to prevent liability arising out of potential errors in registration.

#### ***TRADING INFRASTRUCTURE, MARKET DEPTH, CURRENT PARTICIPANTS, TRENDS AND IMPLICATIONS***

Edwin Aalders, International Emissions Trading Association (IETA), chaired the panel.

Louis Redshaw, Barclays Capital, UK, presented on EUA price determinants, which include: marginal cost of carbon dioxide emission reductions; political intervention; weather; liquidity in the market; and supply of CERs, noting that the easiest and largest capability for reduction is in the power sector. He said that CER supply is growing rapidly, leading to a decrease in their price. In conclusion, he stressed the need for companies to understand various factors that are affecting carbon dioxide prices, cautioning on uncertainties in the market and prices and suggesting use of carbon dioxide risk management.

Mark Meyrick, EDF Trading Limited, made a presentation comparing EUA and CER prices. He noted that EUA prices have moved from 6.65 Euro to 29.50 Euro, driven by a variety of factors, including: strong demand from western utilities; fuel prices; and a lack of fundamental knowledge of the market, exhibiting some of the classic symptoms of a new market. On the other hand, he noted that CER prices have firmed slightly this year, from around 4-5 Euro per ton to around 8-12 Euro per ton. However, he said that CER prices are highly project-specific, are not communicated in a transparent manner and have no clear correlation with other factors.

Phil Brown, European Climate Exchange, introduced the Exchange, which is a central marketplace for trading EU allowances. He noted that 90 million tones of carbon dioxide have been traded this year, and the market infrastructure has featured: increasing numbers of market participants; nine brokers with seven completing exchange offerings; price reporters and indices; and 11 national registries currently operational. He said that as the exchange carries on, market risks emerge as a result of

the diversity of NAPs and legal jurisdictions, price volatility, and various local liquidity pools. In conclusion, he said that a healthy market requires fair market prices, liquidity, easy access, credit management, and post-trade administration.

John O'Brien, Carbon Capital Markets, UK, talked about impact of CER/ ERU prices on EUA prices. He said that the CDM market can be an important tool for companies in the EU ETS to meet their targets, while the JI market is less developed because it mainly involves government buyers. He also highlighted CDM market risks, including: regulatory, technology, financing, country, ownership, and delivery. In summary, he said that both CDM and JI markets are interesting for ETS companies, while risks and uncertainties make valuating CERs and ERUs difficult.

Harri Laurikka, GreenStream Ltd., explained the work of intermediaries in the market, identifying his company's clients as traders and exchanges (buyers) and industrial and energy companies (sellers). He analyzed the reasons why many companies have not yet entered the market, including that registries are not yet operating in some countries, that some companies do not having a trading strategy and prefer to observe the market evolution, and that some companies do not favor speculation at this point in time.

Toby Campbell-Colquhoun, Shell Trading, UK, explained the trading strategy for his company, which owns refineries, combustion installations and power generators. He reflected that contrary to predictions that carbon dioxide prices would be tied to the marginal abatement costs of emissions reductions, the price is linked to other factors such as the costs of fuel alternatives, such as natural gas. This is due to the fact that the first commitment period is insufficient for putting new abatement technologies in place for most major emitters. In this sense, he emphasized that prompt definition of NAPs for the second ETS commitment period is critical for long term strategic investments in abatement technologies.

Participants then commented on the presentations, highlighting the interrelation between gas, electricity and carbon dioxide prices, with some noting that the origin of price drivers is not yet clear. On problems related to the delivery date and the risk of default by intermediaries, some operators reported their intention to deliver a day earlier to prevent last-minute problems for brokers.

#### ***BEYOND 2008: LINKING TO NON-EU SCHEMES AND NEW INSTRUMENTS***

Jürgen Salay spoke about linking the EU ETS to other GHG markets. He emphasized that the EU and its member States can all participate in the Kyoto Protocol mechanisms as Parties to the Protocol, at government level or through the private sector, in order to achieve their reduction targets, while companies may use JI and CDM credits for compliance with the EU ETS. He noted two ways of linking of ETS to non-EU GHG markets: firstly with the Kyoto Protocol mechanisms, the EU ETS is already linked to CDM and will be to JI from 2008 (when ERUs start being

issued); and secondly with other GHG markets which are being designed and considered by other Kyoto Protocol Parties.

Kuniaki Ito, Japan Bank of International Cooperation, Japan, presented Japan's GHG policies, Japan's ETS and the Bank's engagement in the carbon market. He said that Japan's Kyoto Protocol target achievement plan was recently approved by the cabinet, with new measures being explored, including a GHG reporting system, a voluntary emission trading scheme, and the promotion of Kyoto Protocol mechanisms. On Japan's ETS, he noted that it is government-led, voluntary, experimental, and educational, and currently has 34 participants. He also stressed the need for linking Japan's ETS with other schemes including the EU ETS as well as cooperation with countries such as the US, Australia and other Asian countries.

John Schmidt, State Government of New South Wales, Australia, introduced a state-based emissions trading scheme, pointing out that the Australian federal government has not yet ratified the Kyoto Protocol. He noted that the scheme's goals are to: provide a consistent emissions trading framework across Australia; reduce GHG emissions and assist in meeting Australia's Kyoto Protocol target; allow for consistency with international developments; and minimize costs and regulations for participants. Regarding linking this scheme with the EU ETS, he said that if the Kyoto Protocol is ratified by Australia, linking could be done through the Kyoto Protocol's emission trading mechanism, and if the Kyoto Protocol is not ratified by Australia, a special linking arrangement with the EU ETS would be required.

V. Gavrilov, Ministry of Economic Development, Russian Federation, introduced his country's approaches to the implementation of the Kyoto Protocol, noting that while national legislation implementing the Kyoto Protocol's mechanisms has not yet been enacted, the country plans to implement JI from the beginning of 2006. In terms of cooperating with the EU ETS, he said that his country expects to maximize attention to the greening of existing projects and to find appropriate solutions for Kyoto risk mitigations.

Olga Gassan-zade, Point Carbon, Ukraine, highlighted the gap in emission reduction credits that some Annex I Parties will face for achieving their Kyoto targets and considered the availability of alternative solutions including the supply of excess AAUs by Ukraine and the Russian Federation. She noted that although some predict a collapse in carbon credit prices as soon as these AAUs enter the market, such a situation is unlikely to occur due to logistical and administrative burdens faced by these two countries, and because they will probably not enter the market and be negotiated directly by governments on a bilateral basis.

Edwin Aalders said linking is always positive for business and industry, providing benefits in cost reduction, flexibility and impact on overall GHG emissions. However, he cautioned on the need to meet certain conditions such as: GHG credits' fungibility; integrity and consistency in the monitoring, verification and registry requirements; and, most importantly, keeping the process simple.

In the discussion, participants agreed that a collapse of GHG credit prices due to excessive AAUs from Eastern European countries is unlikely, with Japan estimating that AAUs will be negotiated within a political setting, and others commenting that negotiations for the Kyoto Protocol's second commitment period will influence decisions by the Russian Federation and Ukraine on marketing AAUs. They also considered the possibilities of linking the EU ETS with voluntary mechanisms in Japan, Australia, Canada and the US, concluding that the Australian system is the most EU-compatible at this point.

### **CLOSING SESSION**

Marina Ploutakhina encouraged panel Chairs to reflect on the meeting's outcomes.

Bill Kyte highlighted that the panel on the status of regulatory implementation had shown the emission trading process to be up and running. He recognized there are still obstacles to overcome, but noted that they will be streamlined and harmonized over time, leading to positive outcomes in GHG emission reduction and sustainable development.

Peter Pembleton said that the panel on registries and transaction logs highlighted the urgency of putting in place and linking registries, noting that in 18 months the international transaction log will have to be implemented, generating a need for additional financial and human resources to adequately operate it.

Edwin Aalders noted that the panel on trading infrastructure indicated that the young carbon market presents both opportunities and risks for companies with its evolution remaining yet to be seen.

Ingo Puhl highlighted that the panel on monitoring, reporting and verification identified various problems, suggesting a "learning by doing" approach. He said the Panel also acknowledged industry's constructive role, calling for further experience- and information-sharing at all levels.

Jürgen Salay highlighted the increasing number of players in the carbon market and expressed satisfaction at the wide range of seminar participants.

József Feiler said that the panel on regulatory issues sent a clear message against member States playing by different rules in the ETS implementation. He noted that a lot of questions exist on JI after 2008 since there is no clear international set-up so far.

Jeff Chapman said that the panel on corporate decision-making and compliance management raised a serious question about industry's competitiveness in relation to ETS, suggesting the importance of continued consideration of this issue to ensure that industry becomes more competitive through ETS implementation.

In her concluding remarks, Marina Ploutakhina said the seminar highlighted the overall complexity and uniqueness of the EU ETS as well as its linking with Kyoto Protocol's mechanisms. She called for continued information-sharing and exchange among countries and reemphasized UNIDO's commitment to facilitating industry's participation.

## UPCOMING MEETINGS

### 24TH SESSION OF THE IPCC AND WGIII MEETING:

The meeting will take place from 22-28 September 2005, in Montreal, Canada. The 8th session of IPCC WG III will meet from 22-24 September, and will be followed by the meeting of the 24th Session of the IPCC, which will take place from 26-28 September. For more information, contact: IPCC Secretariat; tel: +41-22-730-8208; fax: +41-22-730-8025; e-mail: IPCC-Sec@wmo.int; Internet: <http://www.ipcc.ch/meet/session24.htm>

**FIFTH ANNUAL WORKSHOP OF GREENHOUSE GAS EMISSION TRADING:** This workshop, organized by the International Energy Agency (IEA), the International Emissions Trading Association (IETA) and the Electric Power Research Institute (EPRI) will take place from 27-28 September 2005 in Paris, France. It will combine the presentation of papers on recent research with discussion sessions on different subjects related to GHG emission trading. For more information contact: IEA, IETA, EPRI; e-mail: [etworkshop@iea.org](mailto:etworkshop@iea.org); Internet: [http://www.iea.org/Textbase/work/workshopdetail.asp?WS\\_ID=213](http://www.iea.org/Textbase/work/workshopdetail.asp?WS_ID=213)

### UNEP FINANCE INITIATIVE GLOBAL ROUNDTABLE:

The 2005 UNEP Finance Initiative Global Roundtable will be held from 25-26 October 2005 in New York, US. It will include a strong focus on the issues of carbon and responsible investment. For more information contact: UNEP FI Roundtable Secretariat; tel: +41-22-917-8178; fax: +41-22-796-9240; e-mail: [roundtable@unepfi.org](mailto:roundtable@unepfi.org); Internet: <http://www.unepfi.org/events/2005/roundtable/index.html>

**WORKSHOP ON INTERNATIONAL POLICY APPROACHES TO ADDRESS THE CLIMATE CHANGE CHALLENGE:** Organized by the International Petroleum Industry Environmental Conservation Organization (IPIECA) and China's Office of Global Environmental Affairs, this workshop will take place on 25-26 October 2005, in Beijing, China. Participants will consider key elements of climate change risk management and future policy architectures to address climate change. For more information contact: Tim Stileman; tel: +44-20-7633-2378; fax: +44-20-633-2389; e-mail: [tim.stileman@ipieca.org](mailto:tim.stileman@ipieca.org); Internet: [http://www.ipieca.org/downloads/climate\\_change/beijing2005/beijing\\_email/ccwg\\_beijing.html](http://www.ipieca.org/downloads/climate_change/beijing2005/beijing_email/ccwg_beijing.html)

**CREATING THE CLIMATE FOR CHANGE – THE SECOND SUSTAINABLE ENERGY FINANCE ROUNDTABLE:** This roundtable will take place on 27 October 2005 in New York, US. Participants will explore successful approaches to renewable energy and energy efficiency financing and investment. This event will follow the UNEP Finance Initiative Global Roundtable. For more information contact: Nadim Chaudhry; e-mail: [chaudhry@greenpowerconferences.com](mailto:chaudhry@greenpowerconferences.com); Internet: <http://www.greenpowerconferences.com/sefi/index.htm>

**SECOND TECHNICAL WORKSHOP ON JI/CDM:** The Austrian Joint Implementation/Clean Development Mechanism Programme is holding its second technical workshop on 27-28 October 2005 in Vienna, Austria. The workshop will focus on project opportunities in various host countries and on how to

successfully submit a project to the third tender of the Austrian JI/CDM Programme. For more information contact: Clemens Ploechl, Kommunalkredit Public Consulting GmbH; tel: +43-1-31-6-31244; e-mail: [c.ploechl@kommunalkredit.at](mailto:c.ploechl@kommunalkredit.at); Internet: <http://www.ji-cdm-austria.at>

**BEIJING INTERNATIONAL RENEWABLE ENERGY CONFERENCE 2005:** Following up on the Renewables 2004 event held in Germany, China is holding this Conference on 7-8 November 2005, in Beijing. For more information contact: Mr. Qin Haiyan; tel: +86-10-64228218; fax: +86-10-64228215; e-mail: [birec2005@birec2005.cn](mailto:birec2005@birec2005.cn); Internet: <http://www.birec2005.cn>

**ENERGY SUMMIT IN AFRICA:** This Summit will be held on 7-9 November 2005 in Dakar, Senegal. The issues to be addressed include energy needs and resources, infrastructure, investment, deregulation, the opening up of markets, and new regulations. For more information contact: Jean-Pierre Favennec; tel: +33-1-4752-7116; e-mail: [j-pierre.favennec@ifp.fr](mailto:j-pierre.favennec@ifp.fr); Internet: <http://www.gvpe.org/content/calendar/detail/9326>

**FIRST MEETING OF PARTIES TO THE KYOTO PROTOCOL AND ELEVENTH CONFERENCE OF PARTIES TO THE UNFCCC:** The first Meeting of Parties to the Kyoto Protocol (MOP-1) is taking place in conjunction with the eleventh session of the Conference of Parties (COP-11) to the UN Framework Convention on Climate Change (UNFCCC) from 28 November to 9 December 2005, in Montreal, Canada. For more information contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: [secretariat@unfccc.int](mailto:secretariat@unfccc.int); Internet: [http://unfccc.int/meetings/cop\\_11/items/3394.php](http://unfccc.int/meetings/cop_11/items/3394.php)

**SEVENTEENTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL:** This meeting will be held on 12-16 December 2005, in Dakar, Senegal. For more information contact: Ozone Secretariat; tel: +254-2-62-3850; fax: +254-2-62-3601; e-mail: [ozoneinfo@unep.org](mailto:ozoneinfo@unep.org); Internet: <http://www.unep.org/ozone>

## GLOSSARY AND ACRONYMS

AAUs	Assigned amount units (credits from the Kyoto Protocol's emission trading mechanism)
CDM	Clean Development Mechanism (Kyoto Protocol mechanism)
CERs	Certified emission reductions (credits from the Kyoto Protocol's Clean Development mechanism)
ERUs	Emission reduction units (credits from the Kyoto Protocol's Joint Implementation mechanism)
ETS	Emissions trading scheme
EUA	EU emission allowances (credits from the European Union Emissions Trading Scheme)
GHG	Greenhouse gases
IPCC	Intergovernmental Panel on Climate Change
IT	Information technology
ITL	International transaction logs
JI	Joint implementation (Kyoto Protocol mechanism)
NAPs	National Allocation Plans
PDD	Project design development
RMUs	Removal units (credits from the Kyoto Protocol's land use, land-use change and forestry projects)