

# SUMMARY REPORT

Seminar on International Markets for Carbon Credits  
Energy Federation of New Zealand  
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## Introduction

This one-day seminar focused on the carbon trading opportunities for New Zealand companies holding New Zealand emissions units (NZEU) or possessing carbon abatement opportunities and how they might best realize value.

Speakers from New Zealand and Dutch policy agencies outlined the policy issues involved and private specialists discussed trading arrangements and Kyoto projects. Trading was particularly topical in light of the newly launched European carbon market, known as the European Union Emissions Trading Scheme (EU ETS).

The merits of New Zealand companies participating in Kyoto Joint Implementation (JI) projects tied to Europe were also discussed in some depth. The seminar briefly covered other New Zealand compliance mechanisms, primarily the Negotiated Greenhouse Agreements (NGA) scheme for companies whose international competitiveness may otherwise be a risk.

The seminar was sponsored by the New Zealand Greenhouse Policy Coalition (GPC) and organized by the Energy Federation of New Zealand (EFNZ) and CRL Energy Ltd.

## Key points

- the ongoing allocation of carbon abatement in various forms in New Zealand may exceed € 10 billion per annum (€ 1.0 = NZD \$ 1.8)
- the European carbon market (EU ETS) began trading on 01 January 2005 and (as of the seminar) credits were being exchanged at € 6.70 /tCO<sub>2</sub>
- the European carbon market offers good prospects for New Zealand companies holding NZEU, although the timing of sales will be key
- there is substantial interest in JI projects in New Zealand by European national development banks
- a window of opportunity may exist for New Zealand companies to realize the value of their carbon credits while Russia, the Ukraine, and nearby countries work to establish suitable compliance structures under Kyoto
- a number of issues change markedly on the commencement of the Kyoto first commitment period in 2008
- the term *Europe* is used here to describe the 25 countries currently covered under the EU ETS.

## Overview

### *Note on time-frames*

The various time-frames given under the Kyoto Protocol have a marked effect on the prevailing regulatory context and the implications which follow. These time-frames are:

- present – 2007 : pre-commitment period
- 2008 – 2012 (5 years) : Kyoto commitment period one (KP1)
- 2013 onward : post-commitment period

### *The European carbon market (EU ETS)*

The new European carbon credit market (EU ETS) began trading on 01 January 2005. Europe (unlike New Zealand) has adopted *cap and trade*. Under this mechanism, individual companies are assigned an annual *carbon allowance* based on the facilities they operate. Companies can then elect to use, retain, bank, or trade this allowance. The trading is conducted in *carbon credits*. Companies submit a yearly carbon balance to their respective governments and face non-compliance penalties of €40 /tCO<sub>2</sub> up to and including 2007 and €100 for KP1. Coverage is currently limited to carbon dioxide, but will be extended to include the remaining Kyoto gases (for example, methane) for KP1.

Thus far, credit prices and trading volumes have been low. Trading opened at €13 /tCO<sub>2</sub> and is now (as of the seminar) €6.70. Volumes began at 1000 tCO<sub>2</sub>/day and are now 2000 tCO<sub>2</sub>/day. Bid-spread has dropped from €0.5 /tCO<sub>2</sub> to €0.25.

Pre-market forward trading in credits in 2004 accounted for some 100 million tCO<sub>2</sub>, totaling approximately €360 million.

Not all carbon emitting sectors are included in the current European allocation, but this will change with KP1. The notable exceptions are aviation, shipping, and domestic transport. Several speakers commented that a number of European nations have *over-allocated* with regard to the currently included sectors — a situation which has two implications. First, prices are depressed and market liquidity low because of an oversupply of credits. And second, the extended allocation in 2008 may lead to either severe national shortfalls and/or a much tougher allocation for the newcomers.

The EU ETS is investigating linkages to markets in non-EU countries, including Switzerland and Norway, and also individual US states, Canada, and Japan.

The NZCCO (New Zealand Climate Change Office) is talking to the EU ETS to establish protocols for the two-way exchange of NZEU and EU ETS credits.

### *New Zealand Projects to Reduce Emissions (NZ PRE)*

New Zealand has chosen quite a different carbon credit allocation mechanism from that adopted in Europe. The New Zealand method is based on *additionality* considerations and, in that respect, shares strong similarities with Kyoto JI and CDM.

The New Zealand *Projects to Reduce Emissions* (PRE) scheme allocates credits based on the additionalities associated with a particular project — that is, the added cost and extra abatement of that particular project (or project modification). In terms of detail, *economic additionality* — the added cost — is treated using a simple threshold test and NZEU rationing

(in the event of over-subscription) is based on the so-called *request ratio* between sought NZEU and the expected *environmental additionality* — in this case, carbon abatement. NZEU can only be granted for emissions reductions which occur during KP1.

Once approved, projects are monitored and NZEU issued on an annual basis in light of verified performance. The NZEU receive explicit endorsement from the New Zealand government and are considered to be free from risk.

The PRE scheme is complemented by a (proposed but likely) revenue-neutral emissions charge (carbon tax) and the Negotiated Greenhouse Agreements (NGA) process for industries who can establish that their international competitiveness would otherwise be at risk.

### *Kyoto JI and CDM flexibility mechanisms*

The Kyoto Protocol allows for two forms of project to be undertaken outside national borders in order to provide carbon credits for the originating nation. Joint Implementation (JI) is for projects located in Kyoto countries and the Clean Development Mechanism (CDM) is for projects located within developing countries (as listed in the Protocol). In terms of Europe, these projects may be initiated by an EU ETC participant company (say, a regional electricity company) to improve its carbon balance. Or by a public development agency (for instance, the German KfW) to help meet national Kyoto obligations.

The JI and CDM mechanisms require government to government agreement before individual projects can proceed. Negotiations are being conducted by the NZCCO at present to this end. Forming JI projects with public agencies has the advantage that most agencies will contribute to design and documentation costs, whereas private firms are less likely to so.

More specifically, European development agencies have an interest in New Zealand-based JI projects. The first European JI initiative in New Zealand was through the Dutch government ERUPT scheme. The Meridian Energy Te Aipiti wind farm will receive payment for carbon abatement under this scheme.

JI approvals can be either *track one* or *track two*. Track one is the less onerous for applicants, but requires that the host government be formally designated to assess additionality and monitor compliance.

New Zealand companies may also wish to assist with European CDM projects hosted within the Pacific Rim and south Asia. To date, two CDM projects have been approved worldwide, but a number of others are under consideration.

Plantation forestry and nuclear power projects are currently excluded from JI and CDM.

All forms of JI and CDM activity originating from Europe have been considerably lower than was expected by policy analysts. It was once considered that EU countries would prefer to seek low abatement cost projects offshore ahead of domestic reorganization and open trading. But this has not proved to be the case thus far.

### *Recurrent themes*

It is worth noting some recurring themes before reviewing the presentations specifically. Persistent questions included:

- should New Zealand companies holding NZEU trade these in Europe, in non-Kyoto markets (possibly located in the USA), within a (yet to be established) domestic market, or bilaterally with local NGA companies who are over target ?
- what are the technical issues associated with trading in Europe, given the different nature of New Zealand and European credits and noting that two-way exchange is envisaged ?
- should New Zealand companies engage in JI with European development agencies or private firms — or would they be better advised to collaborate on offset projects with local NGA companies or to apply directly for PRE-based NZEU ?
- do CDM projects hold any interest for New Zealand companies and consultancies ?
- for policy agencies, what is the best way to address the relationship between project size, funder or institutional cut-off, and the costs to the applicant of initiating and submitting a project ?

The same additionality methodology is shared by both New Zealand PRE and Kyoto JI (and, for completeness, CDM). This means that New Zealand companies can work-up abatement projects without necessarily having selected which mechanism to pursue. Similarly, European agencies and firms can elect to either fund New Zealand-based JI projects or simply purchase NZEU (when the conversion details are finalized). Project size is a consideration, with the PRE cut-off being 10 000 tCO<sub>2</sub> and the institutional JI limit often nominally set considerably higher at 250 000 tCO<sub>2</sub>.

## Session 1 — the European carbon market

Chaired by **Rob Whitney** (EFNZ).

**John Kessels** (CRL Energy and ECN) introduced the work of the Policy Studies Unit of the ECN (based in Amsterdam), with whom he is under secondment from CRL Energy. John described the new EU ETS in detail (as given above). The EU ETS is the only international greenhouse gas emissions trading market to date. Its current low price and lack of liquidity is a concern and prices are expected to drop further to perhaps €5 /tCO<sub>2</sub> during this year.

**John O'Brien** (Carbon Market Solutions (Europe)) began by indicating which countries will need to purchase credits (or use JI or CDM) and which should have a surplus (known as *short* and *long* in financial jargon). (New Zealand is, of course, in the fortunate position of being able to include post-1990 plantation forestry sequestration in its national inventory.) John reviewed the range of risks associated with party-to-party carbon credit transactions and noted that measures required by law (for instance, under clean air legislation) cannot be classed as additional. He noted that policy measures are needed to facilitate small emitters gaining financially from the motivated reductions they make. John also discussed issues related to the conversion of NZEU to EU ETS carbon credits and indicated that New Zealand companies will need to factor in some price differential for conversion. Moreover, European JI projects in New Zealand face an assessment hurdle, given the geographic distance to New Zealand and so forth. The issue of Russia coming on-stream was debated — Russia has around 600 million tCO<sub>2</sub>/annum of surplus credits, in contrast to New Zealand with around 6 million tCO<sub>2</sub>/annum.

Audience discussion revealed some interesting points. Trading in Australia or the US was not a useful option in most cases. The transport sector is presenting a major headache for Kyoto

policy-makers in Europe and elsewhere. Exotic forestry has nil chance of being eligible for JI and CDM, although indigenous forest protection and enhancement may well become accepted shortly.

## **Session 2 — Domestic trading and projects (PRE, JI, CDM)**

Chaired by **Catherine Beard** (Greenhouse Policy Coalition).

**Stuart Frazer** (Frazer Lindstrom Ltd) talked mostly about the merits of a domestic carbon credit market for New Zealand. He began by suggesting the New Zealand government could act as a portal for international buyers (in response, the NZCCO indicated this was not current government policy). Stuart reviewed a range of risk and scale issues and showed a slide of the size distribution for PRE projects to date. Only the very largest of these would be eligible for European JI.

Stuart then turned to the basis for establishing a domestic market. A domestic market is particularly relevant to NGA companies, because their *over target* options (see shortly) change in the presence of a "functioning market". If no such market exists, then firms can elect to pay the emissions charge (carbon tax) instead. Or they can undertake *offset activities* in either case. NGA targets are set using an agreed trend line toward *world best practice* (WBP), both defined using a suitable key perform indicator (KPI). Deviations from this trend line are called *deltas* and represent an asset or liability depending on direction. Unlike Europe, there is no explicit penalty for being out of compliance.

Questioning revealed the KPI is generally normalized to production (intensive), rather than being tied to total site emissions (extensive).

**Anna Broadhurst** (NZ Climate Change Office) reviewed the New Zealand PRE mechanism. Two allocation rounds have been held and the second produced an average submitted request ratio of 0.85 and an average successful request ratio of 0.86. Other PRE statistics can be found in her presentation.

A number of European agencies are interested in New Zealand JI projects (including the Netherlands, Austria, and Germany) in order to reduce their national Kyoto obligations. Issues related to minimum project size are important because the PRE cut-off is 10 000 tCO<sub>2</sub> and most EU agencies used 250 000 tCO<sub>2</sub> as their nominal threshold.

**Jane Desbarats** (NZ Climate Change Office) described JI and CDM projects in some detail and the role that New Zealand companies might play. These Kyoto flexibility mechanisms are intended to facilitate lower abatement cost projects in other countries ahead of internal measures (on the assumption this differential exists).

During discussions, one participant expressed doubts regarding the PRE economic additionality test and suggested that some qualifying projects would have proceeded anyway in the absence of NZEU.

The issue of NGA Project Agreement clause 14 headed "grey markets" was raised several times. The NZCCO indicated that it did wish to retain its present meaning, but that the clause might be redrafted to improve the language.

A final question to the Greenhouse Policy Coalition asked whether the coalition was in favor of National Party policy to withdraw from Kyoto. In response, the session chair indicated that GPC members recognized the need to reduce carbon in line with international efforts.

## Abbreviations

CDM	Clean Development Mechanism (Kyoto)
CO <sub>2</sub>	carbon dioxide (or equivalent for other gases) (Kyoto)
ECN	Energy Research Centre of the Netherlands
EFNZ	Energy Federation of New Zealand
EU ETS	European Union Emissions Trading Scheme
GPC	Greenhouse Policy Coalition (NZ)
JI	Joint Implementation (Kyoto)
KP1	commitment period one, 2008–1012 (Kyoto)
KPI	key performance indicator (NZ)
NGA	Negotiated Greenhouse Agreements (NZ)
NZCCO	New Zealand Climate Change Office
NZEU	New Zealand emissions unit
PRE	Project to Reduce Emissions (NZ)
WBP	world best practice (NZ)
t	tonne (1000 kg)
tCO <sub>2</sub>	tonne carbon dioxide (or equivalent) (Kyoto)

## Presentations

These presentations should be available in PDF format from the EFNZ website.

Broadhurst, Anna: *Projects to reduce emissions : update.*

Desbarats, Jane: *The Kyoto flexibility mechanisms : opportunities for New Zealand.*

Frazer, Stuart: *Carbon credit markets : the domestic option.*

Kessels, John: *International markets for carbon credits.*

O'Brien, John: *The New Zealand Projects Mechanism and Kyoto : match made in Heaven?*

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