International Markets for Carbon Credits

Presentation to

Energy Federation of New Zealand

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John Kessels

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Introduction

- ECN and CRL
- European Union Emission Trading System
- EU ETS what, why and how?
- Coverage: What Sectors?
- Compliance
- The EU Linking Directive for JI and CDM
- ERUPT and New Zealand Participation so far
- Conclusions

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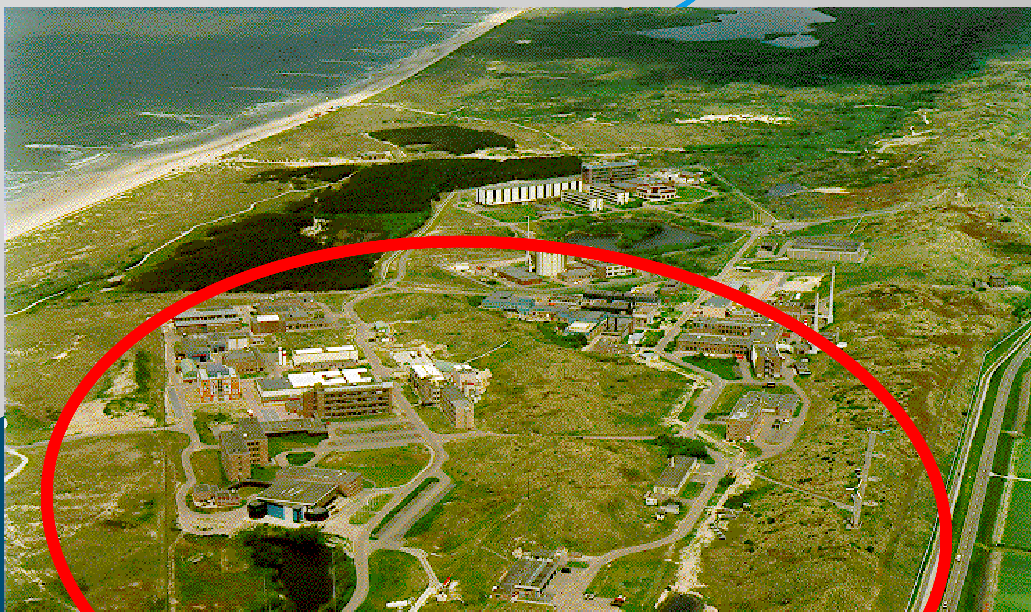
Energy research Centre of the Netherlands ECN



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Programme units Energy Research Centre of the Netherlands (ECN)

- Wind energy
- Solar energy
- Biomass
- Clean Fossil Fuels
- Fuel Cell Technology
- Energy Efficiency in Industry
- Sustainable Energy in the Built Environment
- Policy Studies

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Policy Unit Activities

- Energy markets & international climate policy
- Design and effects of policy instruments (e.g. emission trading, JI, CDM)
  - Analysis of post Kyoto policy options
  - Support Working Group Intergovernmental Panel on Climate Change projects
- Support Dutch energy policy with respect to energy markets and security of supply:
  - Security of supply for electricity
  - Effects of CO_2 emission trading on electricity prices
- Support European energy policy
  - Regulation and sustaining electricity supply systems
  - Integration European markets for electricity, gas, CO2 emissions

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- First Joint Implementation Study
- Managed a Methodology process for development of Projects through the Sustainable Management Fund operated by the Ministry for the Environment
- Undertaken CDM Study in the Philippines
- Undertaking CDM study in China

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EU ETS

- Framework
- Emission trading: What, Why, How?
- Current status

EU ETS: What's that?

- Industry and power sector in EU-25
- Installations (production plant or combustion facility) are allocated annual CO_2 emission rights
- If installation A emits less than allocated, it can sell its allowances to installation B that emits too much
- Price for CO_2 will emerge from market

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Why?

- Climate impact of CO_2 not dependent on where it is emitted
- Reducing CO_2 emissions requires investments
- Large difference in cost of implementing reduction measures across countries and industry sectors
  - E.g. from negative cost to 200 €/tCO_2
- Trading facilitates reductions at lowest overall cost
  - Example: inefficient factory A implements efficient technology at 0 cost, sells emission rights for 10 €/t to factor B where reductions would cost 50 €/t
- Certainty over CO_2 reduction (absolute cap)
- Provides flexibility: more acceptable to industry

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How?

- Cap and trade: national government allocates annual emission rights to every affected installation
- Emissions are monitored by individual installations throughout the year
- End of year: carbon balance must be issued, with or without trading (CDM/JI also allowed)
- Penalty of 40 €/t CO_2
  - if emissions>rights (allocated+bought)
- Appr. 14000 installations in EU (~50% of EU CO_2)
- 2 phases: 2005-2007 and 2008-2012

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EU ETS in 2004

- Over 100 million units forward traded
- Value of approximately 360 million euros
- Value of JI Emission Reduction Units and CDM Certified Emission Reduction Units approximately 5 euro per unit with the World Bank and the Dutch Government dominating the market

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EU ETS Results

- Became operational in January 2005
- Too early to say after only one month
- As of January 20 the price was 6.7 euros with prices in 2004 around 13 euros
- Since becoming operational in January the price has been tracking steadily down

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EU ETS Coverage

- In principle, all six Kyoto Greenhouse gases are covered
- In the first phase the ET will be restricted to CO_2.
- CO_2 accounts for over 50 per cent of EU greenhouse gases
- The scheme applies to the following energy intensive sectors
  - Power plants
  - Steel Factories
  - Oil Refineries
  - Glass and cement installations
  - Paper mills
- 14,000 installations covered
- Discussion that transport sector is included from 2012

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EU ETS Links with Other Countries

- EU is interested in other countries joining the EU ETS
- Preliminary discussion with Switzerland and Norway
- Examining option of US state and regional program linkages
- In the future Canada and Japan

Compliance

- **What are the incentives for companies to participate?**
- **Strict non-compliance penalties**
  - 40 euros/t CO2 will apply in 2005-2007
  - From 2008 the penalty rises to 100 euros/t of CO2

The EU Linking Directive

- JI and CDM credits are equivalent to EU emission allowances for use within the EU ETS by operators to fulfil their obligations
- Credits from JI or CDM forestry projects are excluded at this stage as well as nuclear projects
- NZ Projects Mechanism Credits do have a value in the EU ETS
- CDM projects are likely to be preferred by companies because of low price
- Russia and Ukraine will be major competitors of NZ project credit owners

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Joint Implementation

New Zealand links with EU are most likely via Joint Implementation projects with key elements being:

1. JI must occur between two Annex B Party Governments
2. Memorandum of Understanding between both Annex B Parties needed, for example Holland and Austria.
3. Both Annex B Parties must have undertaken a national inventory and have a registry
4. NZ companies can approach installations in EU without being in the Projects Mechanism

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New Zealand and Carbon Credits

- Dutch Emission Reduction Unit Procurement Tender (ERUPT)
  - Several NZ Companies had Expression of Interest Approved
  - Deadline for full proposal April 5 2005
  - Announcement of successful proposals June 2005
- Meridian was the first company successful in ERUPT with Te Apiti Wind Farm
- The key criterion is price, companies that go outside the price indicated in their Expression of Interest are likely to be rejected.

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Conclusions EU ETS

- EU ETS is a major instrument in climate policy
- 2005-07 is 1st phase of EU CO_2 emissions trading
- Starting phase, new for most stakeholders
- Low liquidity of market due to high emission ceilings
- Low price of CO_2 expected (<10 €/tCO_2)
- 2nd phase: stricter ceilings expected (Kyoto implementation important) and better carbon market

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Conclusions NZ Credits

- EU ETS is the only international GHG emissions trading market
- NZ credits do have a value in the EU ETS
- The Netherlands ERUPT fund is the best option around For NZ companies with 37,500 euros for preparation of Project Design Document and 50 percent up front payment for successful projects
- EU companies will look for the lowest price and are likely to focus on Russia, Ukraine and CDM projects, these projects will compete with NZ

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Contact Details

John Kessels

CRL Energy Ltd

Climate Change Project Manager

Kessels@ecn.nl

Phone: 0031 20 4922812

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