

Fortis and the CO₂ market

Business Opportunities for Sustainable Energy Technologies in Asia
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Kyoto protocol - principles

The Kyoto Protocol became international law in February 2005 and expires in 2012

So far 157 countries have ratified the Kyoto Protocol

- However, the US and Australia have not ...

Two categories

- **Annex I countries:** essentially developed countries (Western Europe, Japan, Canada...) and transition countries (Eastern Europe, Russia, Ukraine...) These countries have emissions targets to reach.
- **Non-Annex I countries:** developing countries (China, India, Brazil,,,)) These countries do not have emissions targets to reach but contribute to the reduction in global warming through accepting CDM projects.

GHG Reduction

Domestic Measures

- Clean Technology
- Energy Efficiency

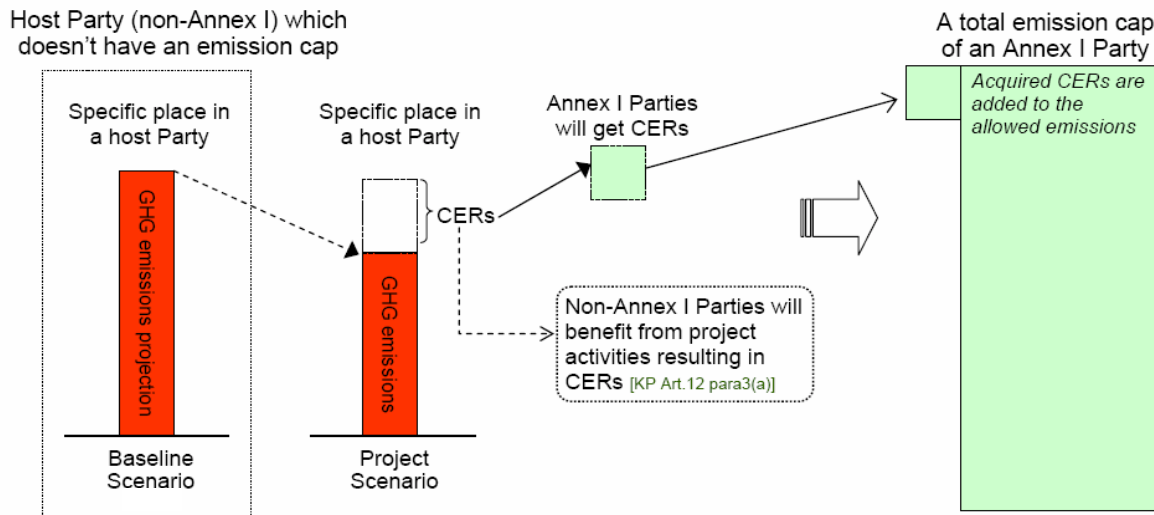
Kyoto Protocol Framework

- Clean Development Mechanism
 - Joint Implementation
- International Emissions Trading

Annex I Countries GHG Emissions

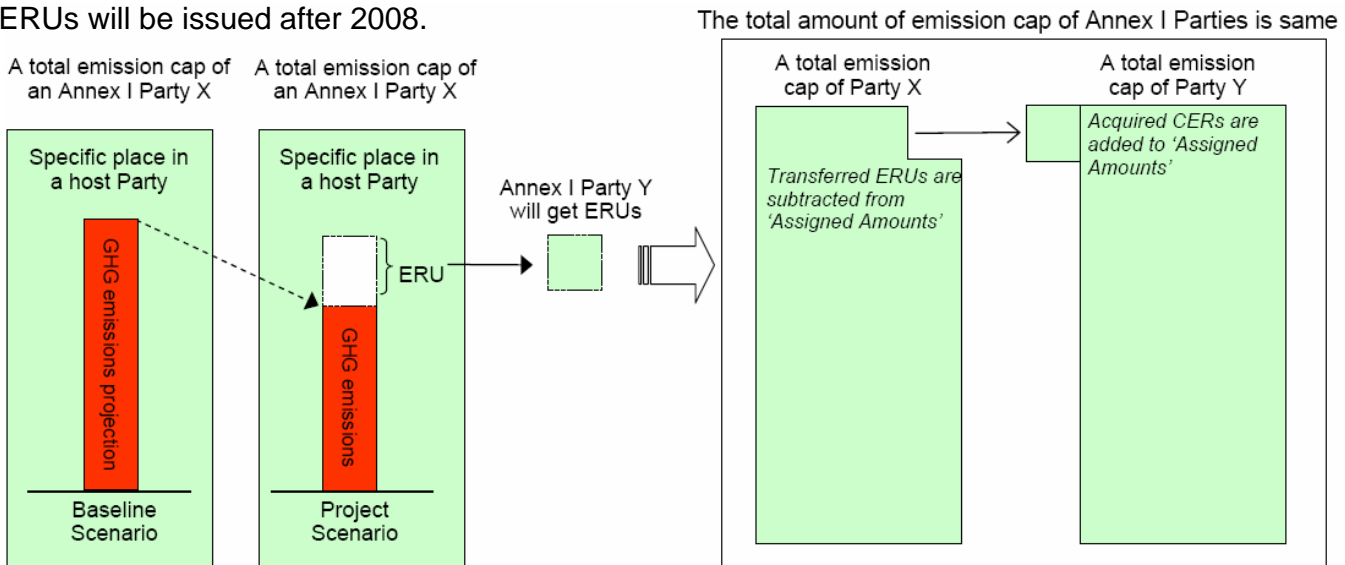
Clean Development Mechanism (CDM)

- Annex I Parties which have emission caps, assist non-Annex I Parties which don't have emission caps, to implement project activities to reduce GHG emissions. Credits are issued based on emission reductions achieved by the project activities when compared to the emissions that would have occurred in the absence of the project.
 - The credit from the CDM is called certified emission reduction (CER).
- Annex I Parties can use CERs to contribute to compliance of their quantified GHG emissions reduction targets of the Kyoto Protocol.
 - As a result, the total amount of emission cap of Annex I Parties will increase.



Joint Implementation (JI)

- Annex I Parties which have emission caps, assist other Annex I Parties to implement project activities to reduce GHG emissions. Credits are issued based on emission reductions achieved by the project activities when compared to the emissions that would have occurred in the absence of the project.
 - The credit from the JI is called emission reduction unit (ERU).
- Annex I Parties can use ERUs to contribute to compliance of their quantified GHG emissions reduction targets of the Kyoto Protocol.
 - The total amount of emission cap of Annex I Parties will not change, because JI is credits transfer between the Parties both of which have emission caps.
- ERUs will be issued after 2008.



Carbon market structure

What is it, how is it functioning?

Global (based on Kyoto framework):

- Trading GHG between countries
- Generating Emission reduction credits through Clean Development Mechanism (CDM) and Joint Implementation (JI)

Europe (based on EU Directive):

- EU ETS, cap-and-trade (Carbon Dioxide only)
- CDM + JI Credits eligible for compliance within EU Member states

Fortis: Products for the emerging carbon markets

Carbon Financial Services

Accepting returns in carbon
Including carbon value in financing
and due diligence
Clean Development Mechanism
project financing

Administration and Trust

Managing customers carbon
accounts
Custody of other Kyoto Compliance
Units
Fund custody and administration

Clearing

Eliminate counterparty risk and
guarantee trades
Cross commodity correlation model

Trading Services

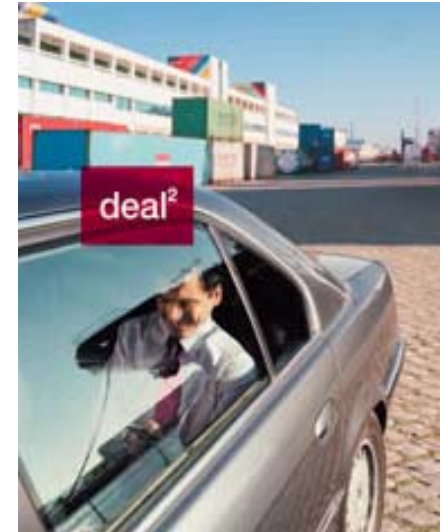
Trading on demand or to order
Index based
procurement/divestment
CER purchasing and sales
Delivery date swaps (quasi repos)

Investing in and developing funds

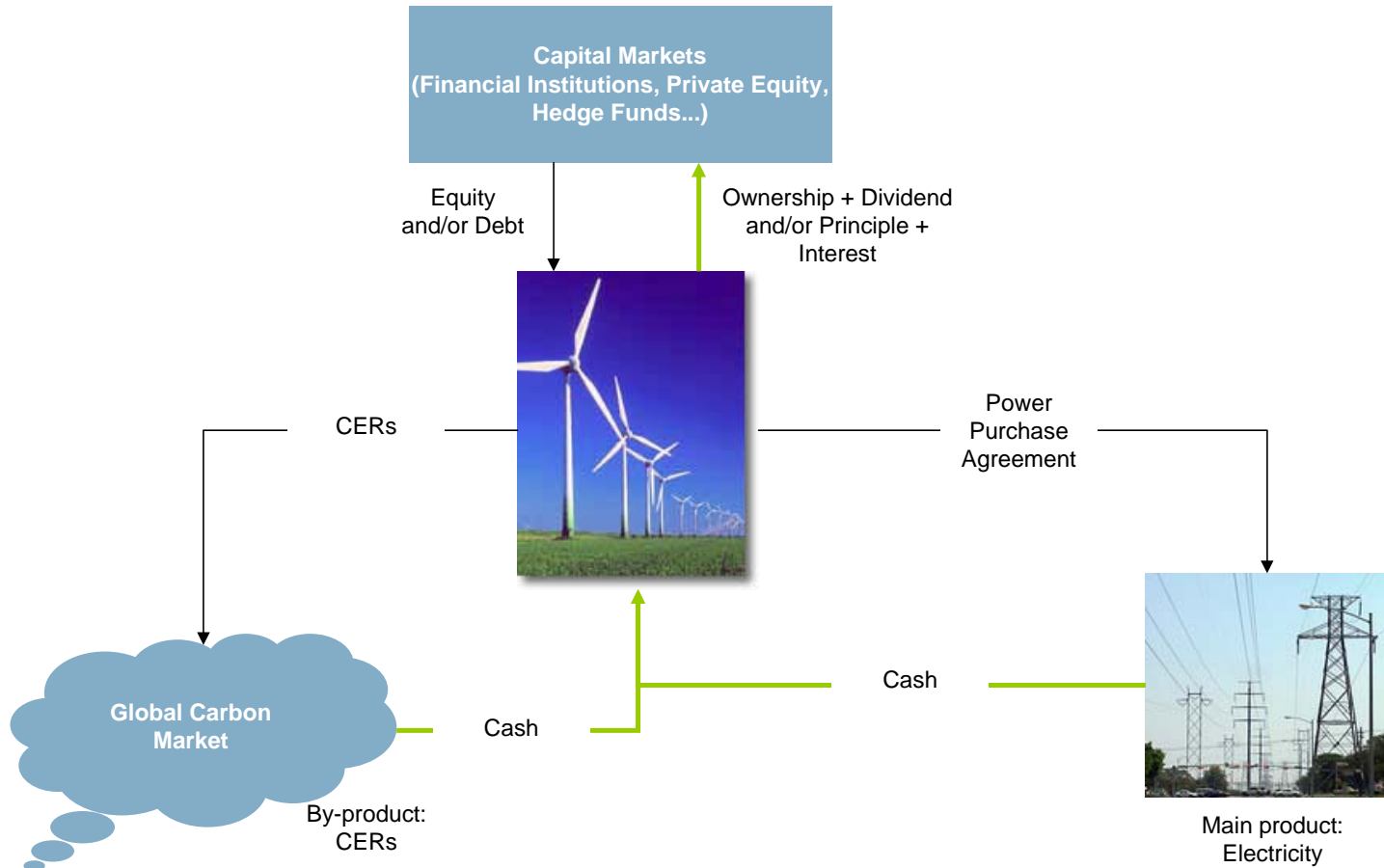
Co-sponsorship of the European
Carbon Fund to ensure reliable
deliveries of Kyoto Compliance
Units for customers

CDP Climate Leadership 2006 – Top 50 Global

Co-sponsor and guaranteed placement CP for European Carbon Fund
Initiated index based position management contracts for customers
Trading on behalf of >100 customers
Cross selling successfully with trust, custody, escrow & settlement



Nature of carbon finance for a typical CDM project



Benefits of incorporating CDM/JI into your projects

Equipment/plant manufactures

- Higher value of your products
- New markets, New clients
- Getting additional financing assistance from Fortis
- “Reputation” Join the fight against climate change



Project operators/owners

- Better equipment
- Lower operating costs
- Better financing terms/Lower debt
- Generating international “currency”
- “Reputation” Join the fights against climate change

EU-ETS compliance entities

- Secure carbon credits

Specific steps

Finance projects

- Incorporate operating cost calculations of projects with carbon credits sales
- Selling call options from the projects
- Part of principal/interest payments can be done through carbon credits

Utilize tools to manage operations and risks

- Forward contracts
- Possible use of carbon credits as collateral
- Escrow
- Custody

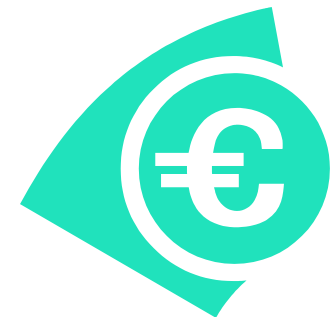
Talk to Fortis!

- When there is a project, let us evaluate how much expected values the project could create

Beware of risks!

- Counterparty
- Performance
- Contractual
 - Project
 - Country
 - Price
 - ITL
 - .
 - .
 - .

Risk mitigation!

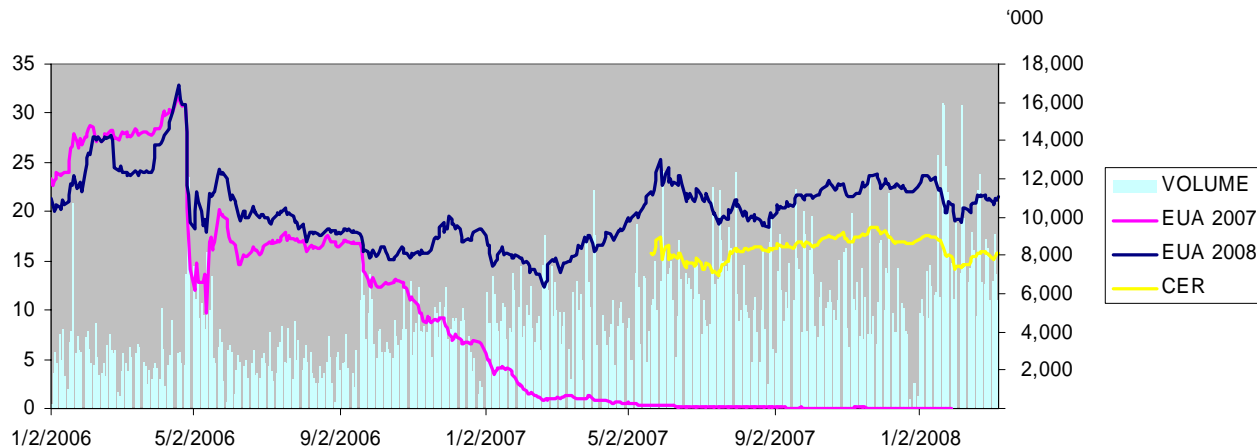


EU-ETS to Date

Liquidity

2005 trade “only” 262MtCO₂ traded out of a total 2,100MtCO₂ allocated
 “critical mass” sum of all shorts ~400MtCO₂ short 05-07
 ~0.5MtCO₂ daily average short (250 trading days per year)
 absolute minimum liquidity requirement for ETS to “work”
 January 2008 8MtCO₂ per day average
 more than 10x “critical mass”

**MARKET DOES MUCH MORE THAN “SIMPLY” TRANSFER LONGS TO SHORTS
 SIGNIFICANT FINANCIAL MARKET**



Beyond 2012...



**Not including a value for CO₂ in investment projections
will become increasingly hazardous**

Some observations

- The EU-ETS has **no** sunset clause; it will continue after 2012.
Currently, this commitment has only been given concrete form up to 2012.
- Europe has already announced its determination to cut emissions further by up to 30% of 1990 emissions by 2020; (20% if other global regions don't take on similar targets).
- Players outside the EU have already expressed interest and are likely to start similar (compatible?) schemes soon.
- As the emission reduction target becomes more ambitious, it is very likely that high CO₂ price signals will be maintained in order to facilitate the necessary emission reductions.

Fortis: a pioneering role in Carbon Banking

2004

- Fortis realizes first-ever trade of European Union Emission Allowances (EUA's) using an ISDA-based contract: Carbon Deal of the Year (Euromoney)
- Fortis becomes a co-sponsor of the European Carbon Fund, investing 15 million Euros to help emerging countries combat climate change.
- December 2004: the Fortis carbon trust and custody services offer is launched

2005

- Started offering carbon clearing services
- October 2005 : won best diversified financial and made Climate Change Leadership Index
- December 2005: concluded first index based carbon compliance contracts with clients

2006

- January: European Carbon Fund awarded Most Promising investment Opportunity
- February: Structured and executed first ever CER call option deal
- April: Concluded first complete second phase strip transaction from 2008-2012
- Jun: Executed first combined trading/trust/escrow/settlement carbon transaction netting 3.3 mio over the first 12 months of transaction
- July: reached the 100th customer milestone with a record 4 new customers in 1 day
- August: transacted and received ownership of issued CERs for the first time
- October: executed first to second phase roll

2007

- January: Launch of the Fortis Carbon Neutrality Program
- March: start of global 24hr carbon banking services from Amsterdam, Hong Kong and Houston
- June: Mandated Financial Service Provider for United Nations Development Program MDP Carbon Facility
- Becoming market maker for EXC and EEX

Fortis, has quickly established itself as the reference for the market, serving more than 200 clients' needs on a daily basis

Tak !



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