

POTS

2nd INTERNATIONAL PALM OIL
TRADE FAIR &
SEMINAR 2008

Changing Marketing Landscape - Challenges for Business Sustainability

24 - 26 August 2008

CDM & CARBON TRADING - MARKET TRENDS AND KEY DRIVERS FOR FUTURE DEVELOPMENT

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SESSION 4

**ENVIRONMENT SUSTAINABILITY AND
INTERNATIONAL COMPETITIVENESS**

CDM & Carbon Trading - Market Trends and Key Drivers for Future Development

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Abstract

The presentation will focus on two main areas: 1) The contributions CDM can make to implement a zero waste policy in the palm oil industry and 2) How the carbon market has evolved and what can be expected after the end of the Kyoto period in 2012.

The typical CDM projects in the palm oil sector include:

- Composting of the solid biomass and/or parts of the waste water to produce a higher quality of organic fertiliser than by applying the solid waste directly.
- Production of biogas from the palm oil mill effluent.
- Production of power from the solid waste and use of the electricity either in industries like palm oil refineries or sale of electricity to the grid.

All these project types support the principles of Roundtable for Sustainable Palm Oil. Further to these specific benefits of the palm projects within the CDM, the whole CDM process is contributing to RSPO principles of transparency by requiring stakeholder meetings and annual publication of the monitoring reports of the projects.

The prices in the carbon market have been quite volatile as with other commodity markets. The Certified Emission Reductions (CERs) from CDM has been trading at a significant discount to other commodities in the carbon market. The presentation will give insights into the main drives behind these observations. Further the presentation will deliberate on the ongoing negotiations for a new climate change agreement to replace the Kyoto Protocol and the implications for carbon prices in the longer term.

CDM & Carbon Trading

Market Trends and Key Drivers for Future Development

Soeren Varming

26th August 2008

2nd International Palm Oil

Trade Fair and Seminar (POTS)

YTL SV Carbon

- Independent subsidiary of YTL Corp.
- Currently the biggest CDM project developer in Malaysia in terms of projects up for validation
- Third biggest developer in ASEAN
- In a strong position to fulfil our commitments to existing and new clients through;
 - Strong financial backing
 - YTL Group's commitment to environmental issues
 - Leveraging off strong technical expertise, core competencies and intellectual capital of the YTL Group

Strong track record

- More than 15 years of experience in the field of climate change and renewable energy
- A strong customer base and healthy business concepts for development of CDM projects in Malaysia
- CDM experience from Malaysia, Thailand, Indonesia, Cambodia, Vietnam, Iran and Nigeria, China

Overview of Presentation

- Brief introduction to carbon credits and CDM
- How is CDM supporting RSPO and sustainable development in the palm oil sector?
- Short and long term perspectives for CDM/carbon credits

CDM creates profit from environmental improvement

- The Clean Development Mechanism (CDM) transforms reductions in emissions of CO₂ and methane into a cash-flow
- The CDM approval mechanism creates a new commodity: Certified Emission Reductions (CER) after national and international approval
- CERs can be sold on the spot-market or on forward contracts
- The buyers commitment stems from the Kyoto Protocol under the UN Framework convention for climate change.
- Trading in CERs reached more than 13 billion USD in 2007 alone

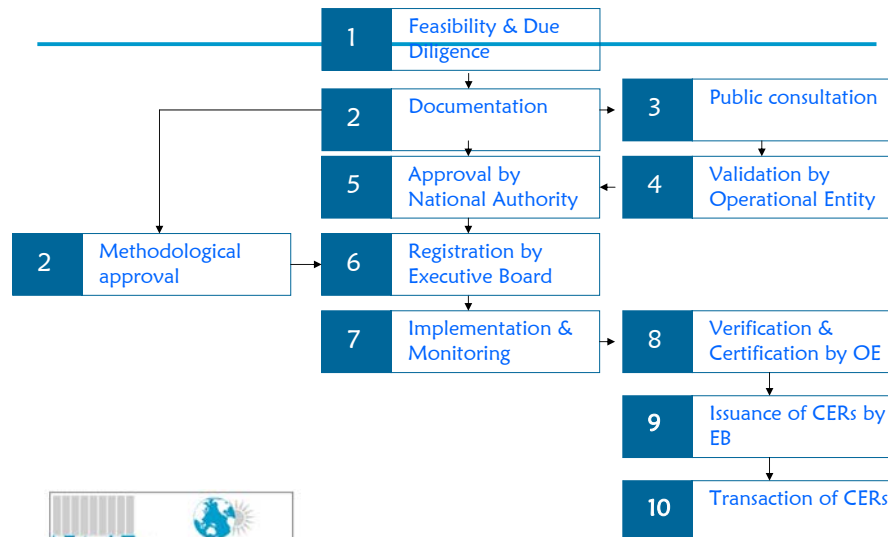


The CDM is real!

- 1047 projects registered of which 26 from Malaysia and 9 from Thailand
- Typical project types in ASEAN: compost, biomass power plants, biogas, landfill gas, Energy Efficiency, cement and minihydro
- 139,500,000 CERs have been issued globally
- First CERs from Malaysia were issued in October 2006



Steps to develop a CDM project



EFB, POME = Waste?



EFB, POME = Assets !!



Vision: Zero “waste”

- Fibre and shell: Export of energy either as fuel or electricity
- EFB: Local fuel in mill – or recycled as compost.
 - Future: Production of ethanol
- POME:
 - Organic content: Use for energy locally through biogas – or recycled as compost
 - Water: RO treated and recycled in mill



Barriers for vision

- Palm oil companies very profitable in core business – low interest for “waste” solutions with lower returns
- General barriers for Renewable Energy
 - PPA and other grid connection issues
 - Subsidies for fossil fuel
 - Technology uncertainties
 - Fuel supply agreements (for non-palm oil players)

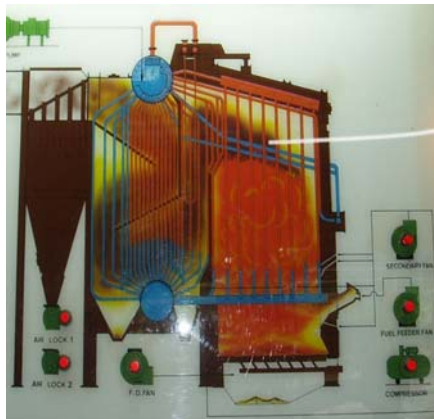


Business strategies to benefit from CDM

- 1) Improve viability of new investments – already considered
- 2) Develop projects only possible because of CDM
- 3) Make CDM financing the foundation of the business



Case 1: Biomass power plant



- TNB tariff
21 sen/kWh
- CER from RE power
3 sen/kWh
- CER from avoided methane
4-8 sen/kWh



Case 2: Biogas from POME



Source: Kim Loong Resources

- Investment
7-10 million RM
- Income w/o CERs
max 1.5 million RM/year
- Income from CERs
1.9 million RM/year



Case 3: Build-Own-Operate



Source: Brite Tech Ventures

- Sewage treatment at Palm oil mills
- Biogas or compost
- All costs born by project developer
- Income mainly from sale of CERs
- Royalty to mill for use of POME



CDM projects in Malaysia

	Number of projects	Of which Registered
Compost	50 (of which 22 POME)	6
Biogas (POME)	32	4
Biomass energy	29	14
Not Palm oil	19	5

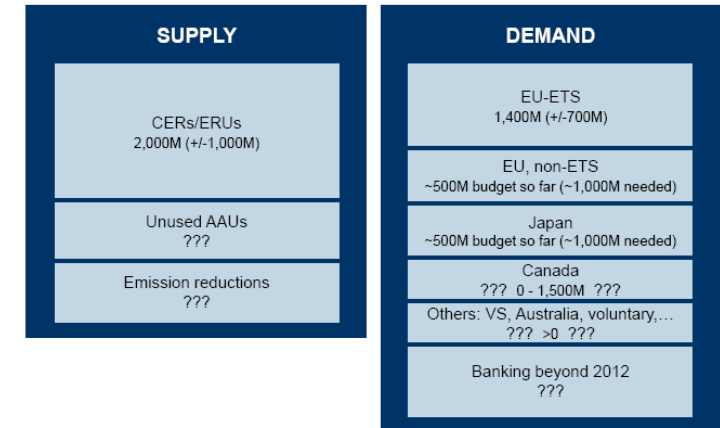


Kyoto Protocol created demand

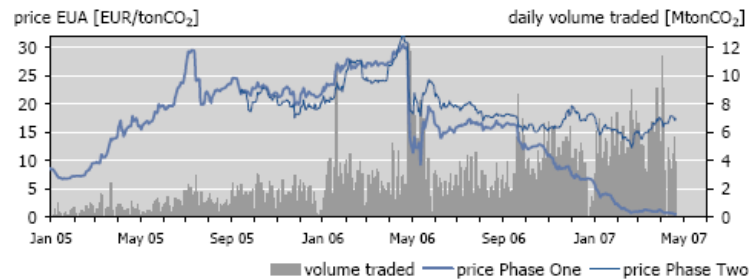
- Adopted in 1997 in Kyoto, Japan
- Sets targets for the emissions of 6 greenhouse gasses for the industrialised countries for the period 2008-2012. On aggregate 5% reduction relative to 1990.
- Defines three flexible mechanisms to secure cost effectiveness:
 - Emission Trading
 - Joint Implementation
 - Clean Development Mechanism



Balance between supply and demand



EU ETS – price driver



Source: Point Carbon



Reasons for difference between EU ETS and CER prices

- Spot prices vs. forward contracts
- Different risk profile
- CDM used to be buyers market
- Difference in bargaining power and/or access to information
- As CERs are issued and can be traded in spot market the two prices should converge



Price and risk of CERs

- Price is linked to the distribution of risk
 - Risk of non-approval
 - Risk of non-delivery
 - Political risks
- Price and cost elements
 - Up front development costs
 - Monitoring and verification costs



What after 2012?

- The EU ETS has no “sunset” clause. It will continue after 2012
- The EU has promised to reduce their emissions in 2020
 - By 20% if the rest of the world does NOT join
 - By 30% if an international agreement is reached
- California and other US states defining emission trading programmes – both presidential candidates support emission trading
- Australia ratified the Kyoto Protocol in 2007



Process for negotiations

- CoP in Bali in Dec 2007 started formal negotiations on a post-Kyoto agreement
- Four international meetings annually in negotiation process. Now in Accra, Ghana
- CoP in Copenhagen in Dec 2009 is the target for conclusion of a new instrument
- Target from G8 to get a new framework within the UNFCCC



Options after 2012 (1)

- Kyoto 2
 - Quantitative targets for more countries
 - Continued CDM/JI
- Sector approach
 - Emission benchmarks for main emitting sectors across continents
- Something else
- Nothing



My assumptions: After 2012

- EU ETS will continue !!(?)
- CDM will still exist ! (?)
- Negotiations just started – results earliest end 2009
- Challenge to get global coverage – Will USA ratify any new agreement?
- Possibility: split market with different rules
- Leads to stable/low prices?!



Looking forward to serving you

- Our commitment continues to be one of:

Creating maximum value of the CERs for the project developer

