

Danish Energy Management
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Current Issues in CDM and Projects in Malaysia

by Henrik Rytter Jensen
Danish Energy Management



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Agenda

- About Us
- The Kyoto Protocol and the CDM
- Project Types, baselines and Additionality
- Benefits from CDM
- Price and Trading
- CDM Project Case in Malaysia
- The Danish Project Development Support

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Danish Energy Management A/S



- Part of Danish Management Group, which comprises:
 - Danish Energy Management (DEM), Danish Project Management (DPM) and Danish ICT Management (DICTM)
- Danish Energy Management A/S founded in 1986, is a leading Danish consulting and planning firm that handles all components in the project cycle of energy and development projects specialising in policy development, project management, evaluation, assessment and monitoring.
- **Provides services on CDM project preparation, baseline studies and emission trading as independent consultant**

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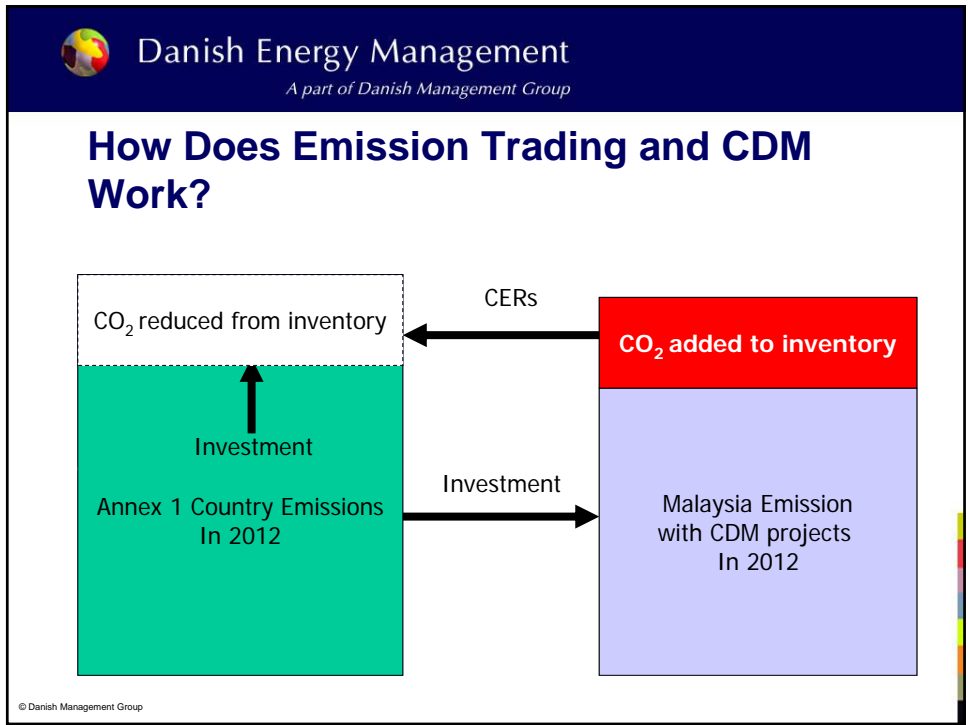
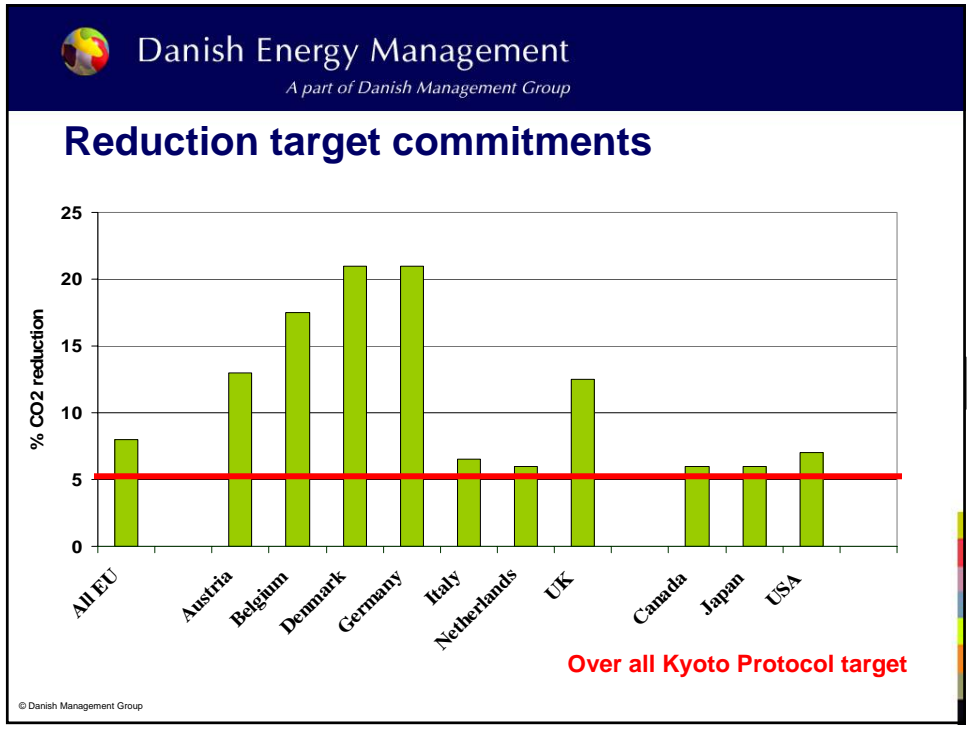


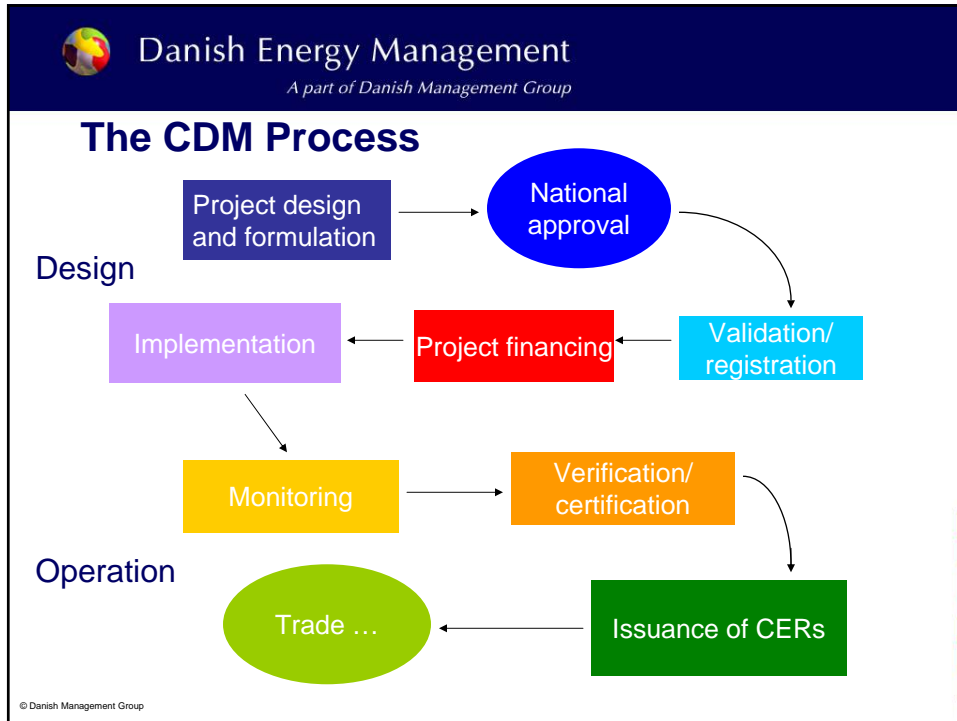
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The Kyoto Protocol and the Clean Development Mechanism

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Project Types, Baselines and Additionality

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Eligible Project Types

- End-use energy efficiency improvement
- Supply-side energy efficiency improvement
- Renewable energy
- Fuel switching
- Sinks (only afforestation and reforestation)
- Solvent and other product use

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Common Project Types

- Project types seen so far,
 - HFC23 reduction
 - Land fill gas projects
 - Methane Capture (e.g. swine manure, palm oil effluent etc.)
 - Renewable electricity to grid (e.g. Biomass, Wind power, hydro etc.)
 - Fuel switch (Coal/oil to gas or biomass)
 - Cogeneration

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CO₂ Reductions from Energy Savings

Type of saving	Amount	kgCO ₂	kgCO ₂ /G J
Coal	1 tonnes	3,626	94.4
Fuel Oil	1 tonnes	3,109	77.4
Gas	1 mmBTU	53	56.1
Electricity*	1 MWh	600	166

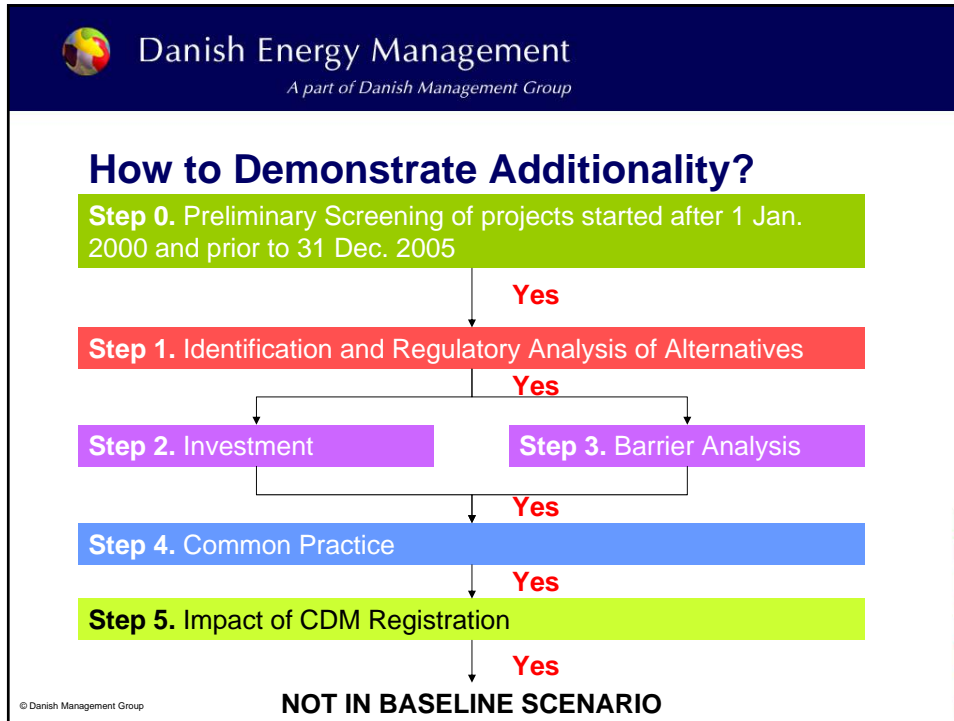
*Based on the generation mix in West Malaysia



Additionality

The project activity is expected to result in GHG emission reduction, which is additional to any that would occur in the absence of the project activity, i.e. it should not be included in the baseline.

- A qualitative or quantitative assessment of different potential options and an indication of why the non-project option is more likely.
- An indication that the project type is not common practice in the proposed area of implementation, and not required by a Party's legislation/regulation.



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Benefits from CDM projects

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Company benefits from CDM projects

Financial:

- Support for new technology to reduce emissions / enhance business
- One more product to sell
- Revenue stream

Company profile:

- International cooperation
- Green Profile – shows that the project is sustainable and environmental friendly

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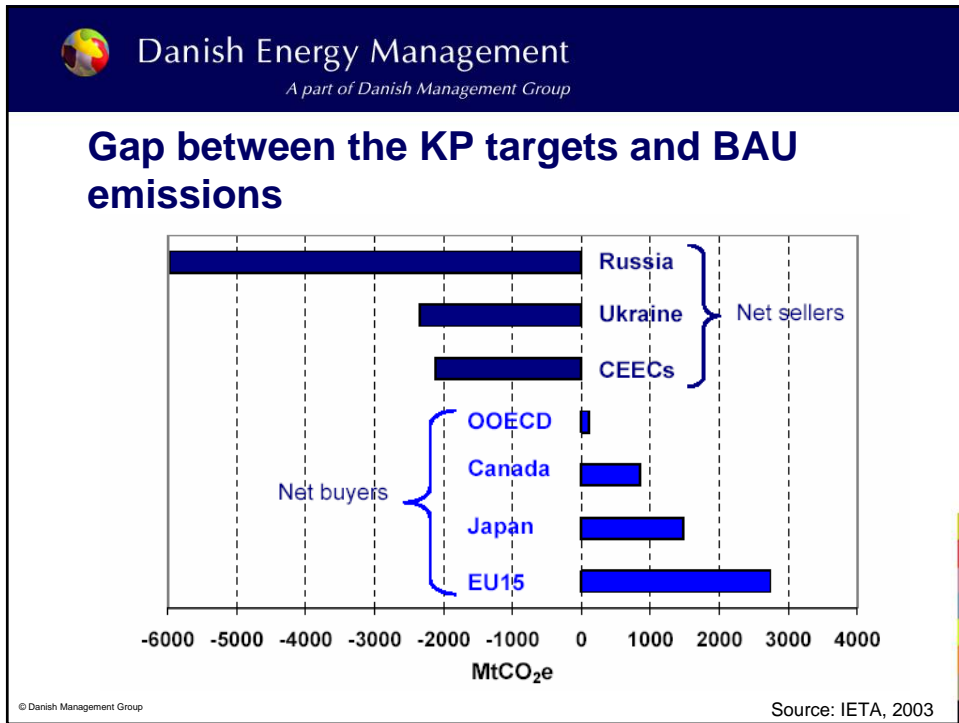
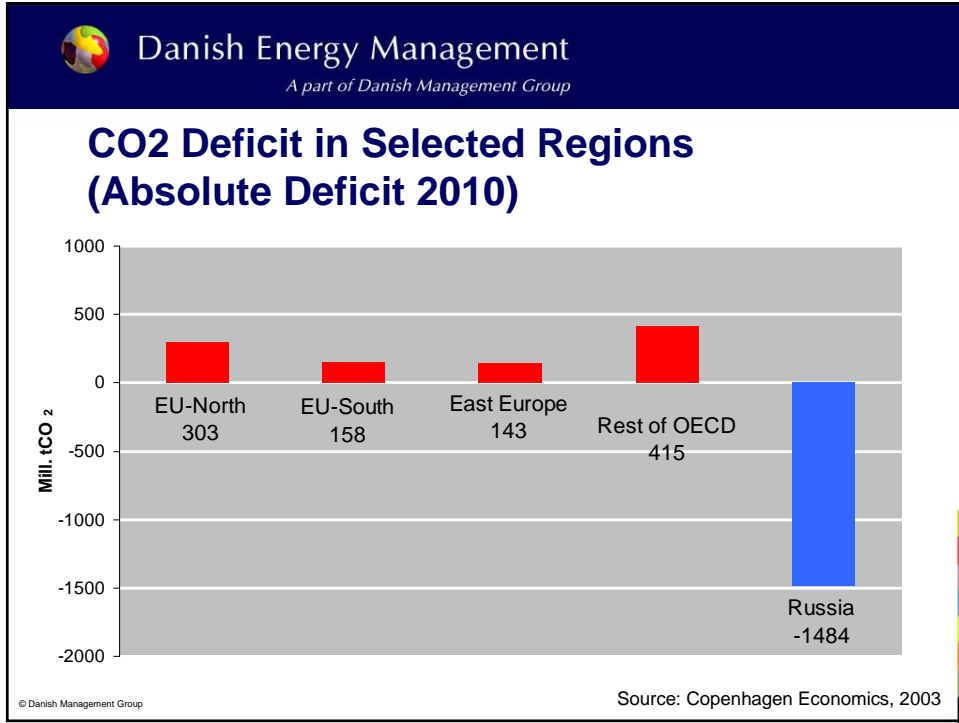


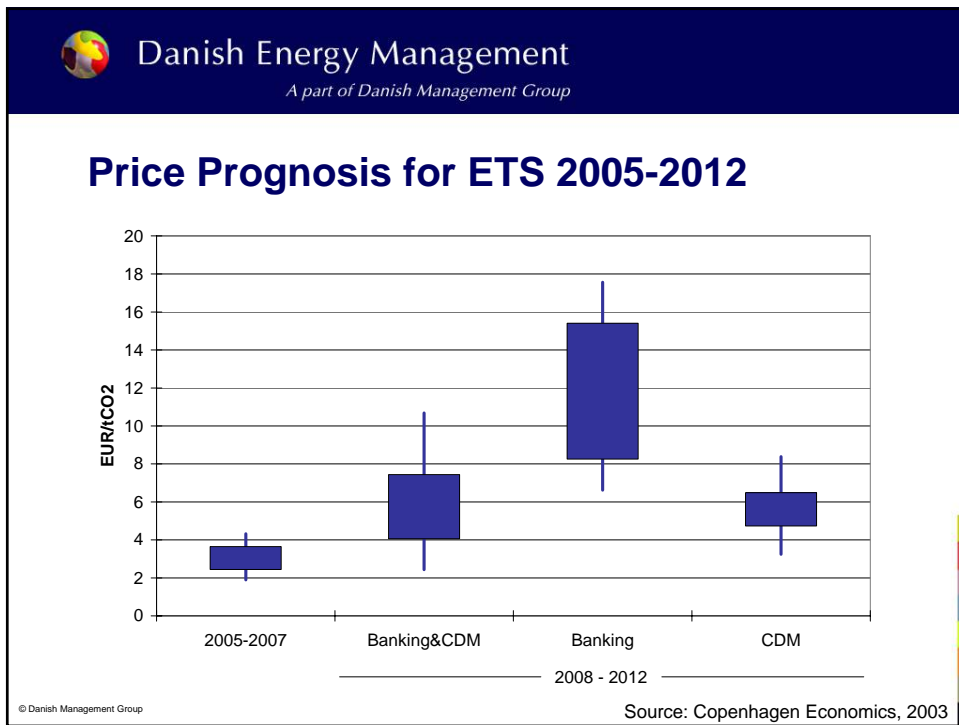
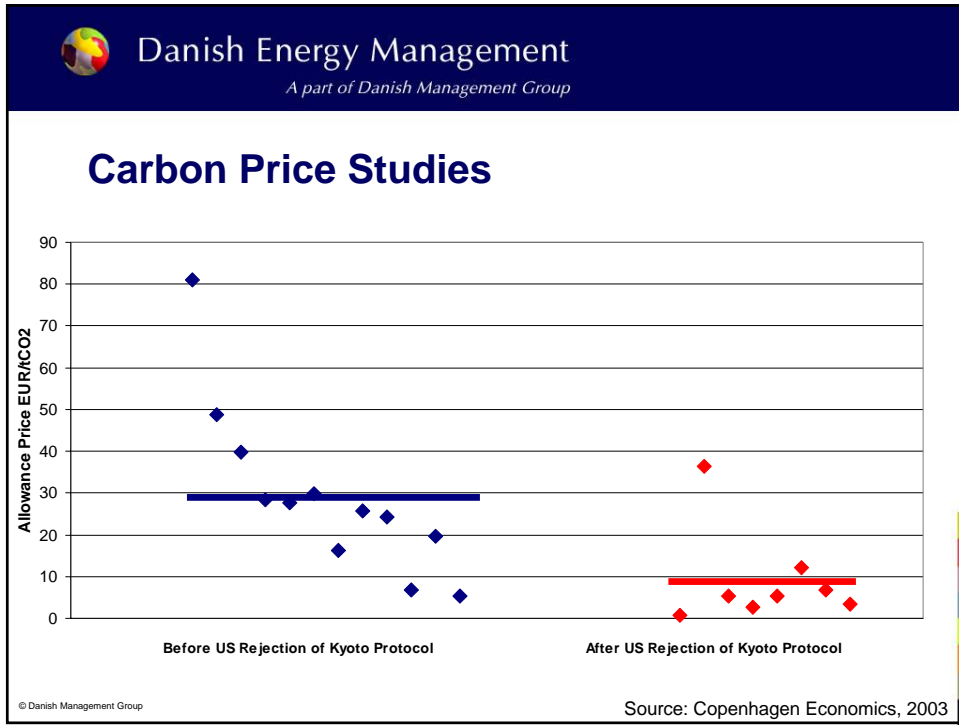
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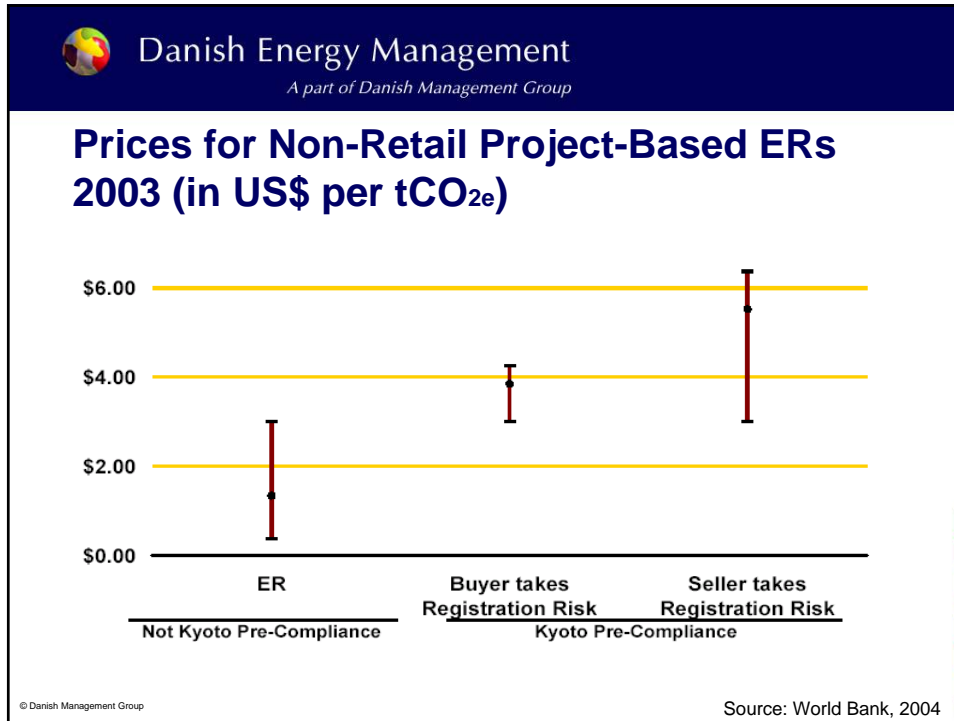
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Price and Trading

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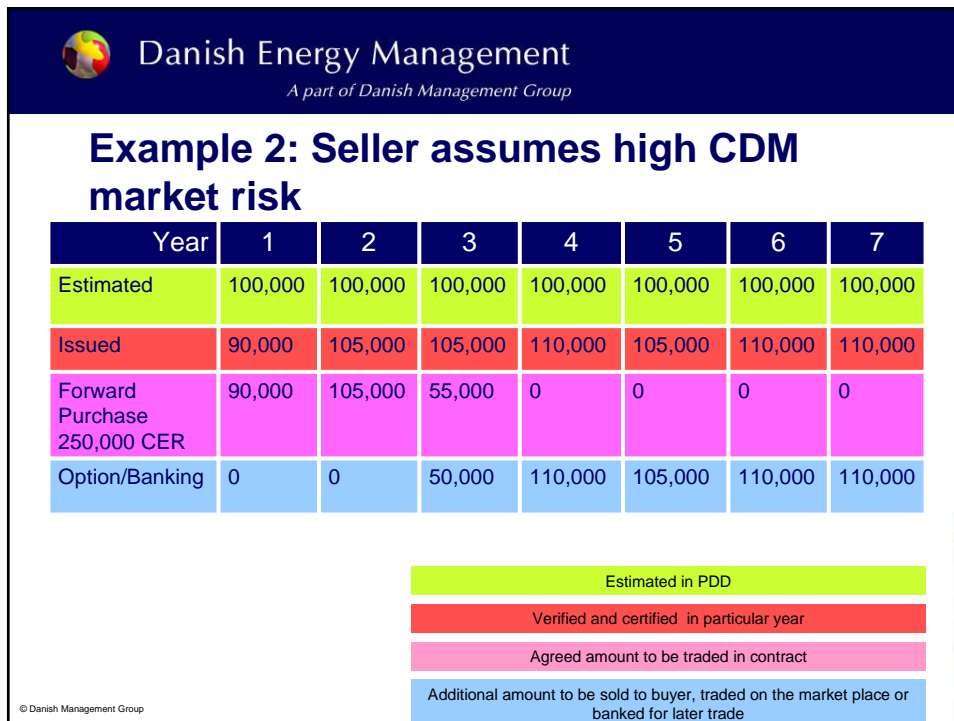
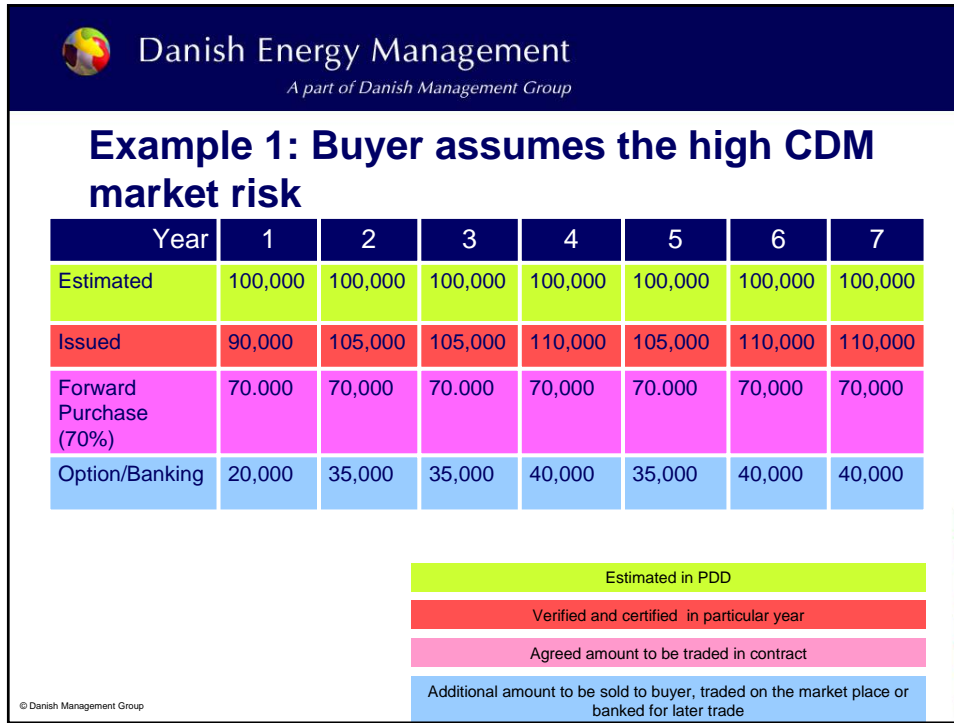


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Trading Examples

- **Forward Purchase**
 - Seller and buyer agrees on a price up-front for an agreed amount of CERs
 - Payment upon purchase
- **Options**
 - Buyer takes an option to purchase an agreed amount of the CERs, when they are issued
- **Bank and Trade**
 - Seller sells the CERs at the prevailing market price when CERs are issued or bank the CERs for later trade

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CDM project development in Malaysia

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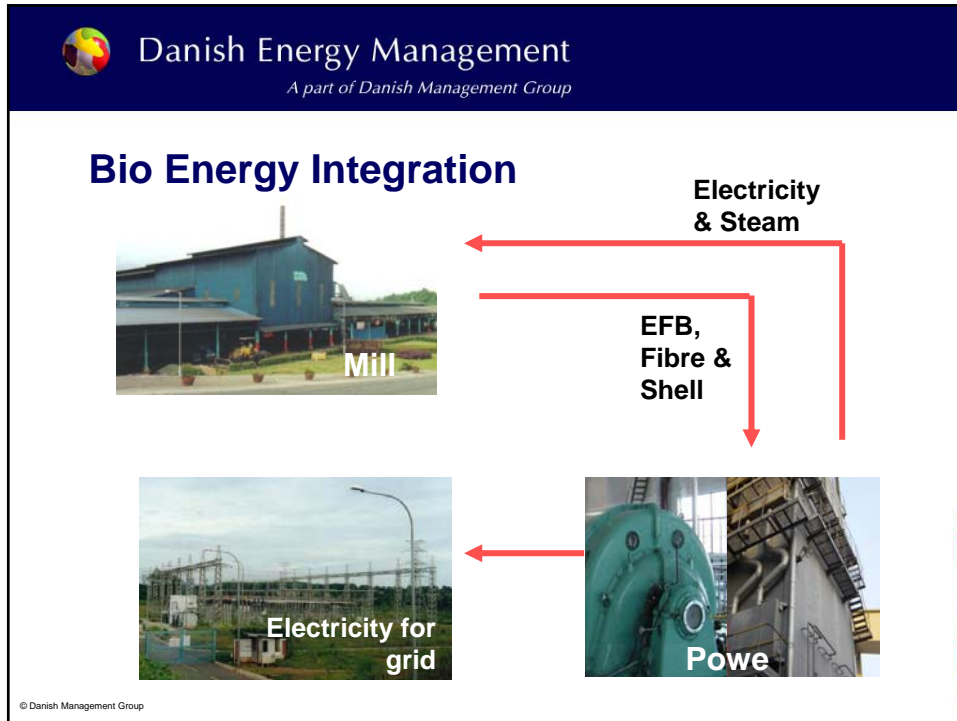
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Example of CDM project: Bio Energy Project

- Cogeneration
 - CDM project type: *Renewable Energy Generation for a Grid*
- 10 MW electricity export to grid
- Baseline emissions are the emissions from the grid system
- Project emission ~ zero
- Annual CO₂ reduction
~ 51,200 tonnes/year



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Developer's Reasons for CDM

- Project among first of its kind in Malaysia
- Electricity tariff was not attractive
- Project less viable than alternative investments for investor
- Uncertain value of the biomass resource in future
- Green Profile for the project




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Time line


2002	Project idea was initiated in early 2002
	June PIN was finalised and submitted to the Swedish Gov't
	September PIN was submitted to MoSTE
October REPPA (21 years agreement)	
2003	April Letter of Intent Cooperation on CDM projects btw Developer and Danish Govt.
	August Conditional Approval of PIN by DNA
2004	April PDD submitted for validation
	August Draft validation received and submission for DNA approval
	October Power plant is expected to commence its operation
2005	January Generate CERs

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Example of CDM project: Landfill gas project

- Cogeneration
 - CDM project type:
 - Methane Capture
 - Renewable Energy Generation for a Grid
- Two land fill sites
 - Landfill 1: New landfill 1800 t/day, 66 hectares
 - Landfill 2: Old landfill to be closed by 2004, 500 t/day
- Technology: Gas Extraction wells, pipes, flares and gas engine
- Baseline emissions are methane emissions from the landfills and GHG emissions from electricity grid power
- Project emission ~ zero
- 7-years projected emission reductions
 - 2.2 MtCO_{2eq}



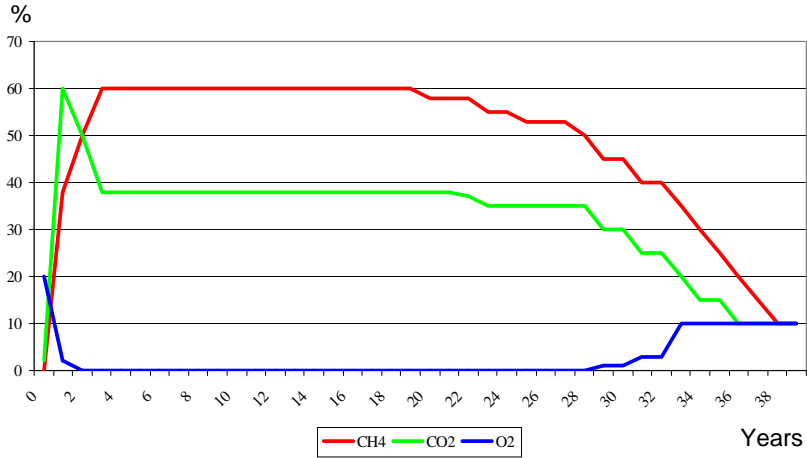
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Landfill Gas Production Profile



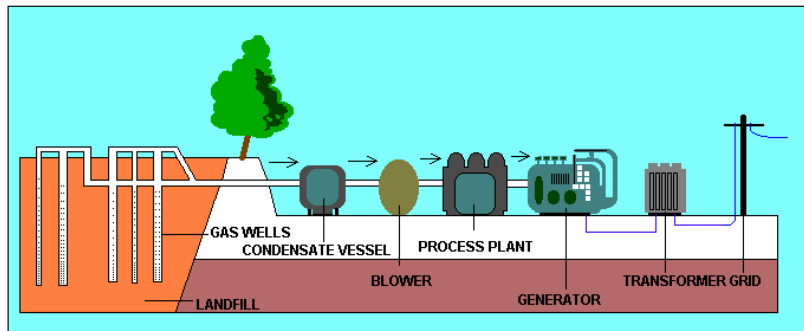
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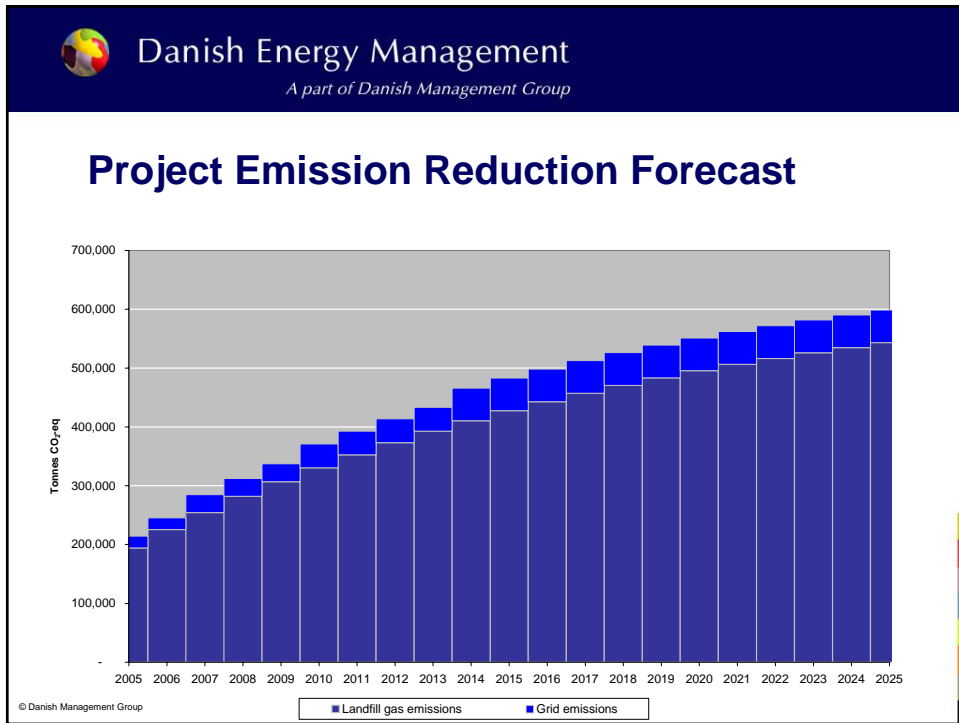
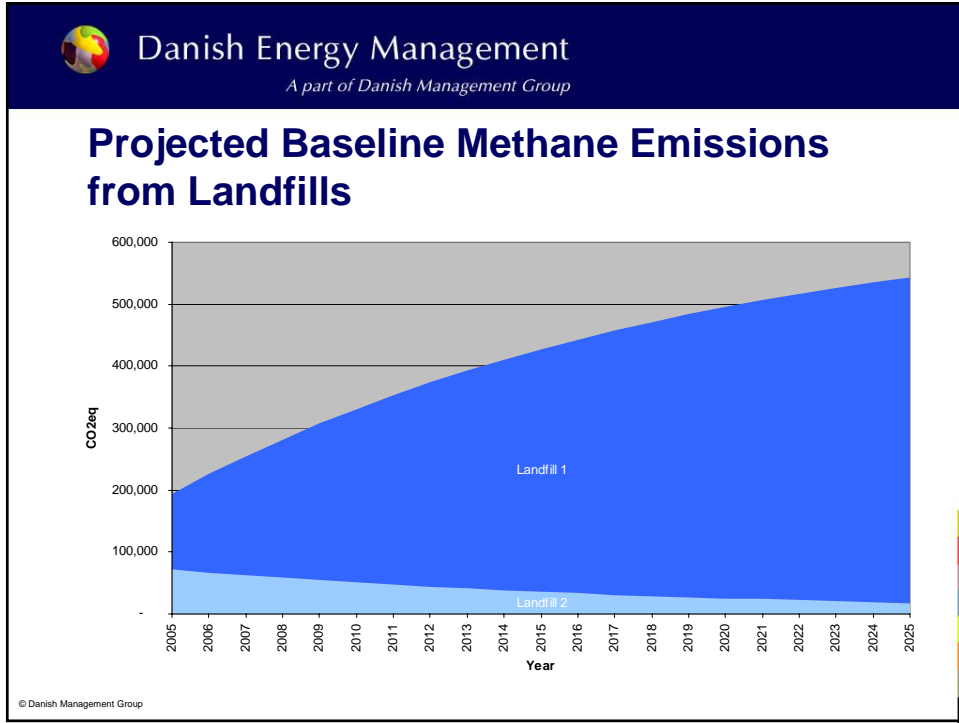
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Technical Installations



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Danish CDM Project Development Support

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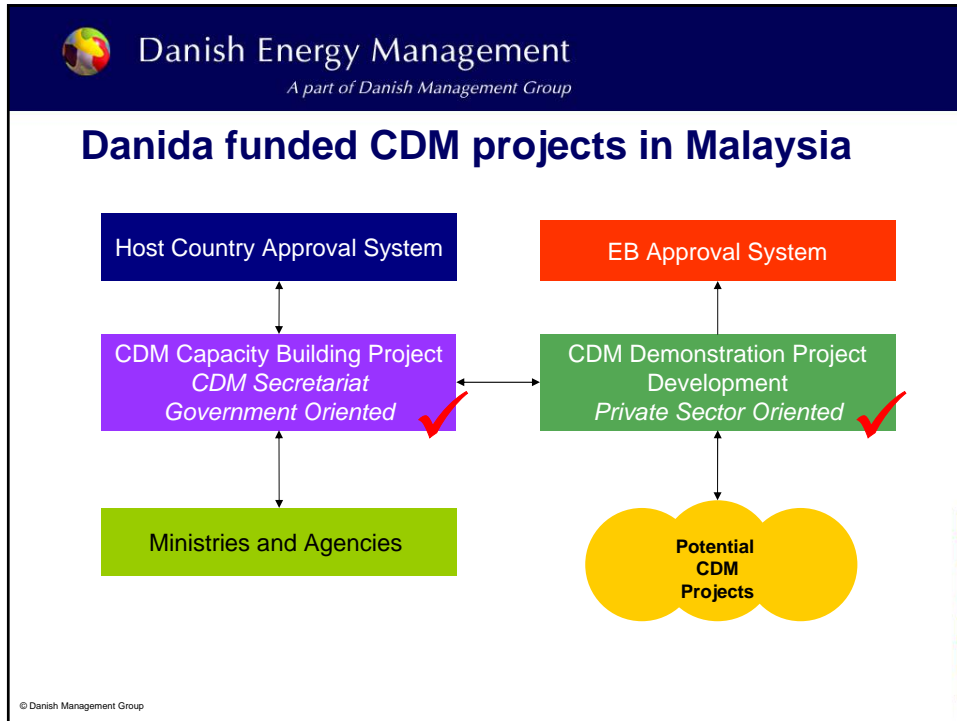
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CDM Trading with the Government of Denmark

- Denmark and Malaysia have agreed to facilitate CDM projects in Malaysia – trade emission reductions between the countries
- Both ratified the Kyoto Protocol
- Denmark has a emission reduction commitment of 21% (world highest)
- Part of the Danish Climate Change Strategy includes funding and assistance for CDM project development

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- The slide, titled "Danish Energy Management", features a "Summary" section with four bullet points. The Danish Energy Management logo and name are at the top. The summary points are:
- CDM provides an extra incentive to projects
 - More and more projects are being developed
 - A CDM project must have a significant reduction potential to off set the project development costs
 - CDM can provide a Green Profile to a project
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Thank You

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Kuala Lumpur Office
36th Floor, Menara Maxis
Kuala Lumpur City Centre
50088 Kuala Lumpur

Phone: +6 03 2615 0014

H/p + 6 01 23 02 39 14

E-mail hrj@dem.dk