

15. Global Carbon Market (English)

Introduction of the Global Carbon Market

Lu Guoqiang, Ph.D.
Foreign Economic Cooperation Office
Ministry of Environmental Protection of China
April 1, 2008

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Origination of the Carbon Market- Emissions Trading

1. SO₂ emissions trading in US
2. Chicago Board of Trade - CBOT
3. SO₂, NO_x, COD
4. Chicago Climate Exchange
5. Reduce emissions and the cost

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Evolution of the Carbon Market

- *United Nations Framework Convention on Climate Change, 1992*
- *Kyoto Protocol and its flexible mechanism, 1997*
Market mechanism, emission trading – cost reduction
- *the UK Emissions Trading Scheme (UK ETS), 2002*
- *Chicago Climate Exchange (CCX), 2003*
- *the EU Emissions Trading Scheme (EU ETS), 2005*

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Structure of the Global Carbon Market

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Size of the Global Carbon Market

Table 3.1: Reported volumes and value 2005, 2006, forecast 2007
Reported and estimated volumes 2005 and 2006, together with forecasted volumes for 2007, in Mt CO₂e and million €. 7 % discount rate employed for CDM and JI where price is at point of delivery. Prevailing carbon prices at time of writing for 2007 forecast.

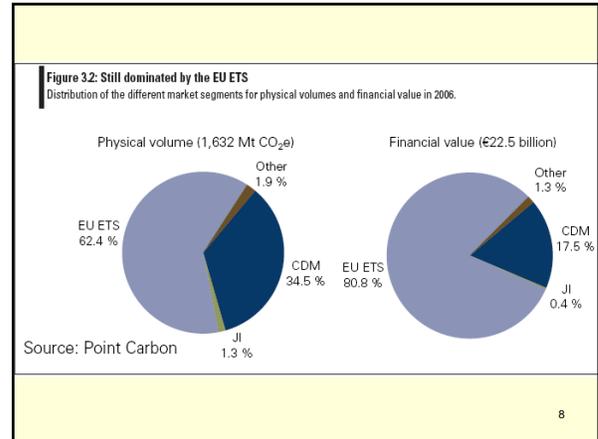
	2005		2006		2007	
	Final figures		Final figures		Forecast	
	[Mt]	[€ million]	[Mt]	[€ million]	[Mt]	[€ million]
EU ETS total	362	7,218	1,017	18,143	1,760	18,503
- OTC + exch.	262	5,400	817	14,575	1,550	15,903
- Bilateral	100	1,818	200	3,568	200	2600
Other ETSs	78	52	31	300	50	500
CDM	397	1,985	523	3,349	456	3,260
CDM 2nd	4	50	40	571	96	1,061
JI	28	96	21	95	45	277
Sum	799	9,401	1,632	22,458	2,397	23,601

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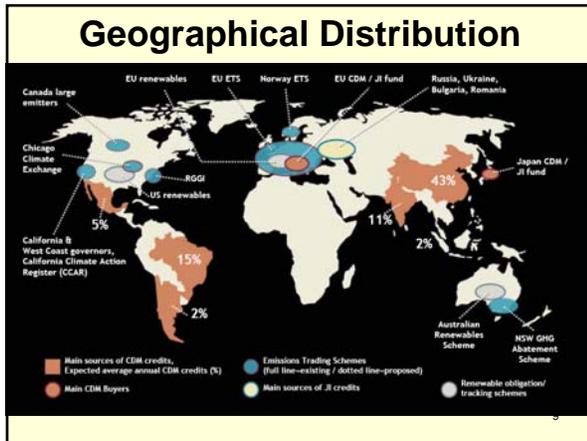
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	2005		2006	
	Volume (MtCO ₂)	Value (MUS\$)	Volume (MtCO ₂)	Value (MUS\$)
Allowances Market				
EU ETS	321	7,908	1,101	24,357
NSW GGAS	6	59	20	225
CCX				
	1	3	10	38
UK-ETS	0	1	na	na
Total	328	7,971	1,131	24,620
Projects Market				
1st CDM	341	2,417	450	4,813
2nd CDM	10	221	25	444
Ji	11	68	16	141
others	20	187	17	79
Total	382	2,894	508	5,477
Total	710	10,864	1,639	30,098

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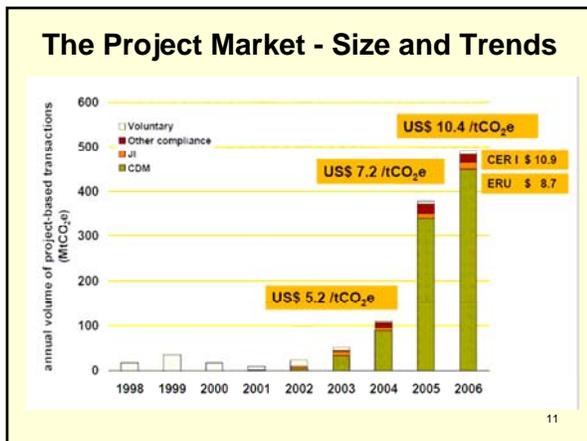
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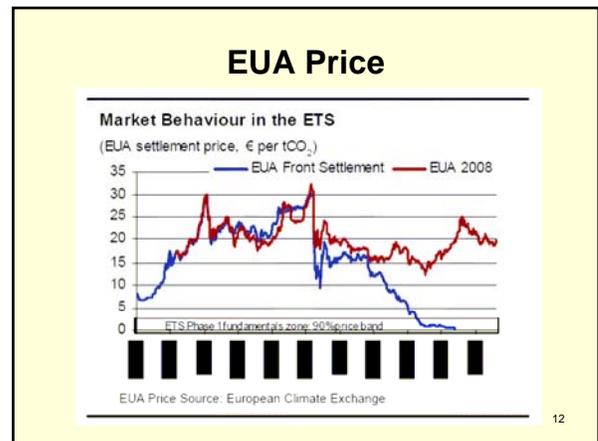
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Name	Start	Geographical scope	Type of GHGs Traded
UK GHGs Emissions Trading Scheme (UK ETS)	2002-end of 2006	UK	CO ₂
EU Emissions Trading Scheme (EU ETS)	2005 start	27 countries in EU, Norway and Switzerland	CO ₂ in 1st period and other GHGs in the 2nd period
Chicago Climate Exchange (CCX)	2003 start	Globe	CO ₂ , CH ₄ , N ₂ O, PFCs, HFCs, SF ₆
NSW Greenhouse Gas Abatement Scheme (NSW GGAS)	2003 start	New South Wales-Power generation projects also in Queensland, South Australia, Victoria, and Tasmania in Australia	CO ₂ , CH ₄ , N ₂ O, PFCs, HFCs, SF ₆
Japan's Voluntary Emissions Trading Scheme (JVETS)	2006 start	Japan	CO ₂
Regional Greenhouse Gas Initiative (RGGI)	Fulfill commitments from 2009	Seven northeast and mid-Atlantic US states: Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont	CO ₂

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USEPA's LFG in China Workshops (2008)

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Projection of the EU Carbon Market

Long-Term EUA Forecast (Real 2006 €/t CO₂)

2007	0.3
2008	18.4
2009	18.8
2010	19.1
2011	19.5
2012	19.9
2013	27.2
2014	27.7
2015	28.3
2016	28.9
2017	29.4
2018	30.0
2019	30.6
2020	31.2

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EU National Allocation Plans for 2008 - 2012

Change in Phase 2 vs. Phase 1 NAP
(Including New Entrant Reserves)



(*): Awaiting EC Decisions

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Insight of the Global Carbon Market

- Global carbon market – linked and united
- A cap-and-trade US ETS may start in 2012
- Diversity of the global carbon market
- Size of the global carbon market
100 times greater than that in 2006
- The ER price will be US\$10 to US\$50 in 2020
- CDM will be eligible after 2012

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