

The CDM in China

Review and Outlook

Presented by the CDM Service Unit China

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(FME)*

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The CDM in China

- ✓ China provides more than 50% of the global Certified Emission Reductions (CERs) and EU based entities are buying more than 80% of these CERs
- ✓ As of 01 October 2008, China has 271 projects registered with the CDM Executive Board (EB) of UNFCCC (annual CERs of 117 MtCO₂eq.)
- ✓ In total, 1445 CDM projects have been approved by the Designated National Authority (DNA) of China until 01 October 2008





The Designated National Authority (DNA) of China and CDM Policy

The National Development and Reform Commission (NDRC) holds the key role for CDM policy and measures in China:

- CDM Board
- DNA
- National Leading Group on Climate Change
- National Coordination Committee on Climate Change





CDM Pipeline, Registered Projects, and Global View

- ✓ After a rapid growth in 2006, China hosts 35% of the global CDM projects and 56% of the annual CERs (pipeline).
- ✓ More than 150 new projects are approved by China's DNA per quarter and 40% of the global pipeline 'at validation' is in China.





Chinese CDM Projects in the Pipeline (01/10/2008)

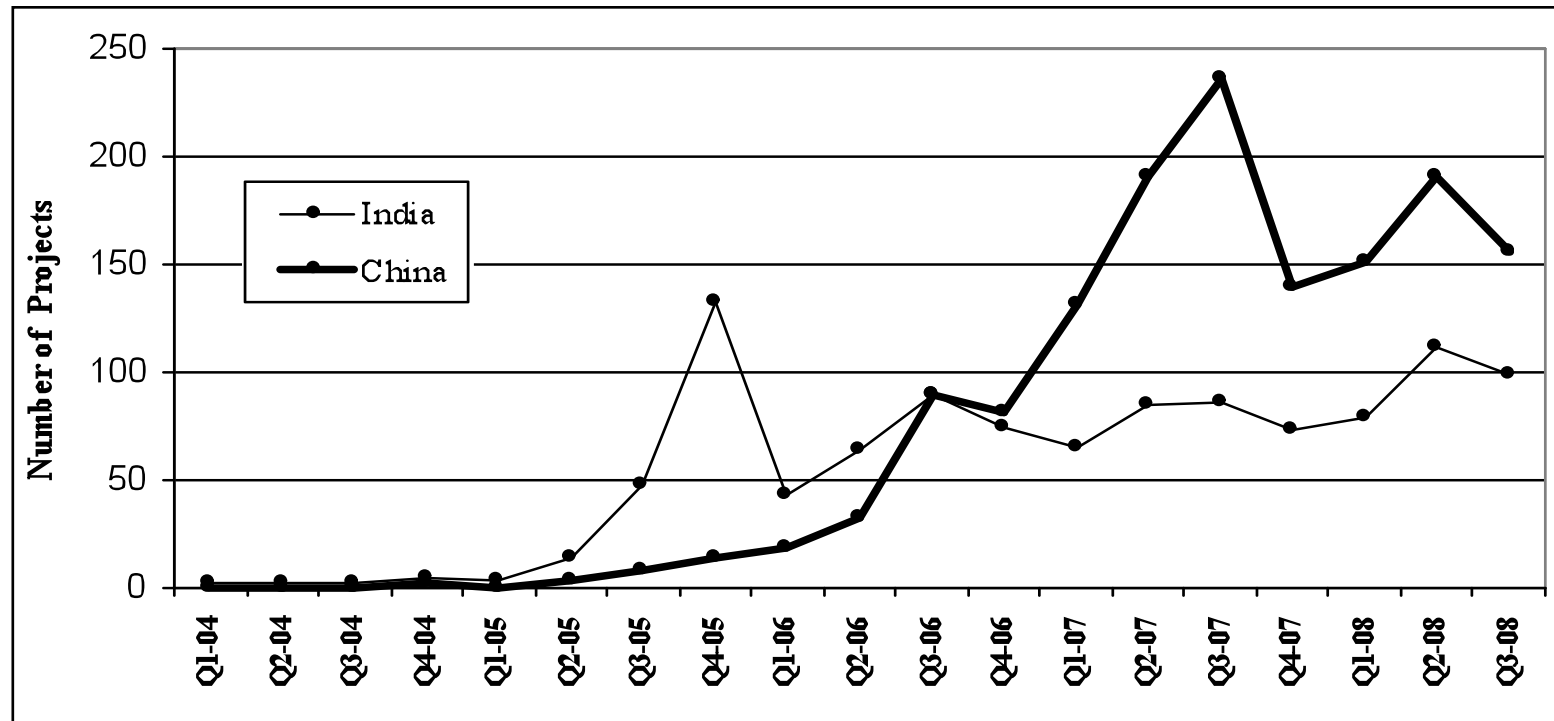
Status	Number of China CDM Projects	Number of world-wide CDM Projects	China's share in world-wide CDM projects (%)	China Annual CER (MtCO ₂ eq.)	China's share in world-wide annual CER (%)
Registered	271	1170	23.2	117	52
Registration Request	47	80	58.8	31.69	77
Correction Request	53	94	56.4	n/a	
At Validation	1042	2565	40.6	156.6	55
Under review	20	41	48.8	n/a	
Review Request	12	17	70.6	n/a	
Total	1445	4064	35.6	305.3	56





China's CDM Projects in the Pipeline (per Quarter)

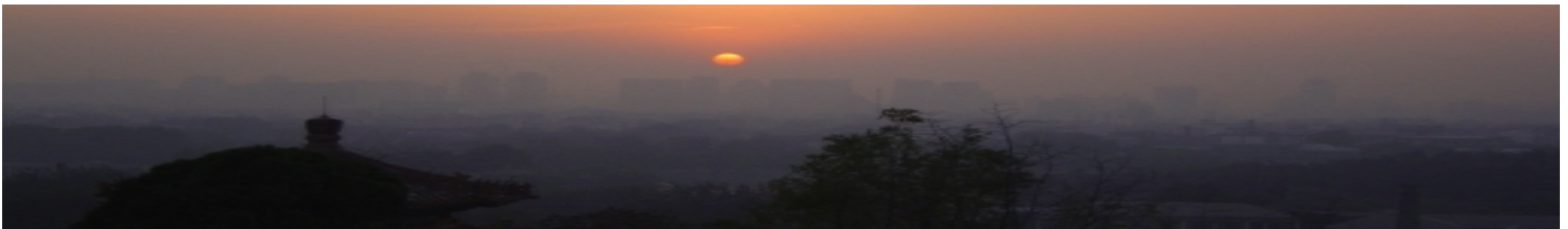
from Q1/2004 – Q3/2008





CDM Project Types, Size and Trends

- ✓ 50% of the project in the Chinese CDM pipeline is from Hydropower, followed by Windpower (18%) and Energy Efficiency (16%)
- ✓ The average project size is decreasing. The number of Biomass and Biogas Projects has doubled in 2008



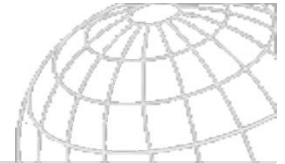


Variation of CDM project size

Project Type	Project Size Variation	Project Type	Project Size Variation
Biogas	- 42.7	Hydro	+18.6
Biomass Energy	+ 29.5	Landfill Gas	-28.4
CBM/CMM	- 24.5	N2O	-28.3
EE for own generation	- 36.7	Reforestation	+26.9
Fossil Fuel Switch	+16.5	Wind	+9.3
HFCs	+3.5	Total	-48.7

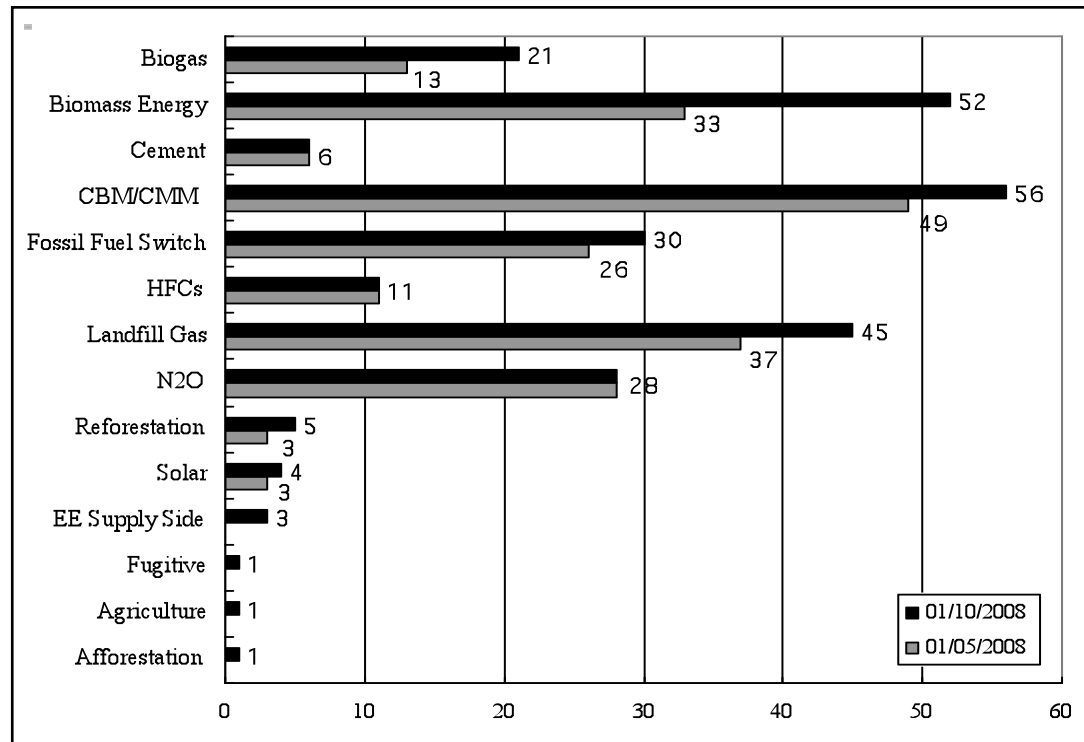
Variation of CDM project size between registered and overall Pipeline (% of average CER in ktCO₂eq/yr/project)





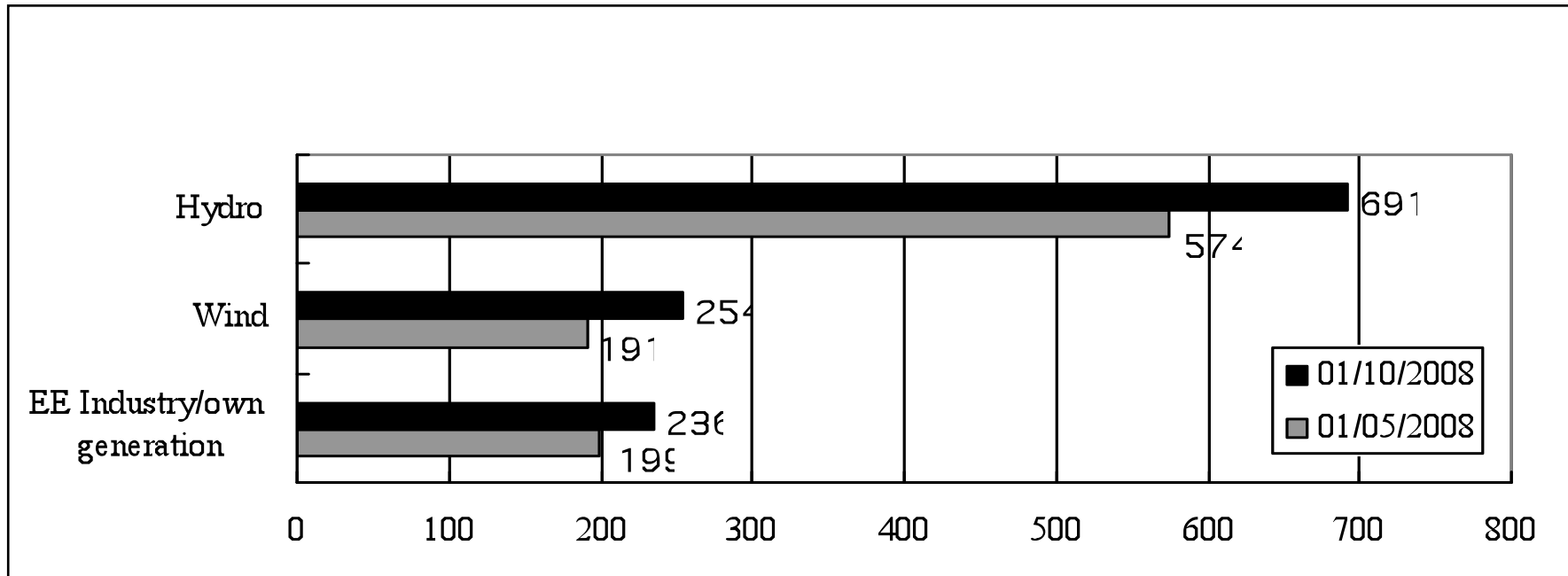
China CDM Pipeline (project number) per sector type

for 01/05/2008 and 01/10/2008





China CDM Pipeline per sector type



China CDM Pipeline (project number) per sector type for 01/05/2008 and 01/10/2008





Issuance Rates of CERs

- ✓ High variation in CER issuance
(min. 12% - max. 132% for Windpower)
- ✓ CDM Projects are vulnerable to low performance
(lower issuance of CERs than calculated in PDD)
- ✓ Experienced PDD writer is important for performance





Risks associated with monitoring through to the CER issuance process

CDM project cycle	Delivery risk
Monitoring	<ol style="list-style-type: none"> 1. Delay in operation 2. Technology mismatch and underperformance 3. Mismatch between monitoring plan in PDD and actual emission reduction
Verification	<ol style="list-style-type: none"> 1. DOE capacity bottleneck 2. UNFCCC capacity bottleneck 3. Limited verification guidance





CDM Regional Dimensions

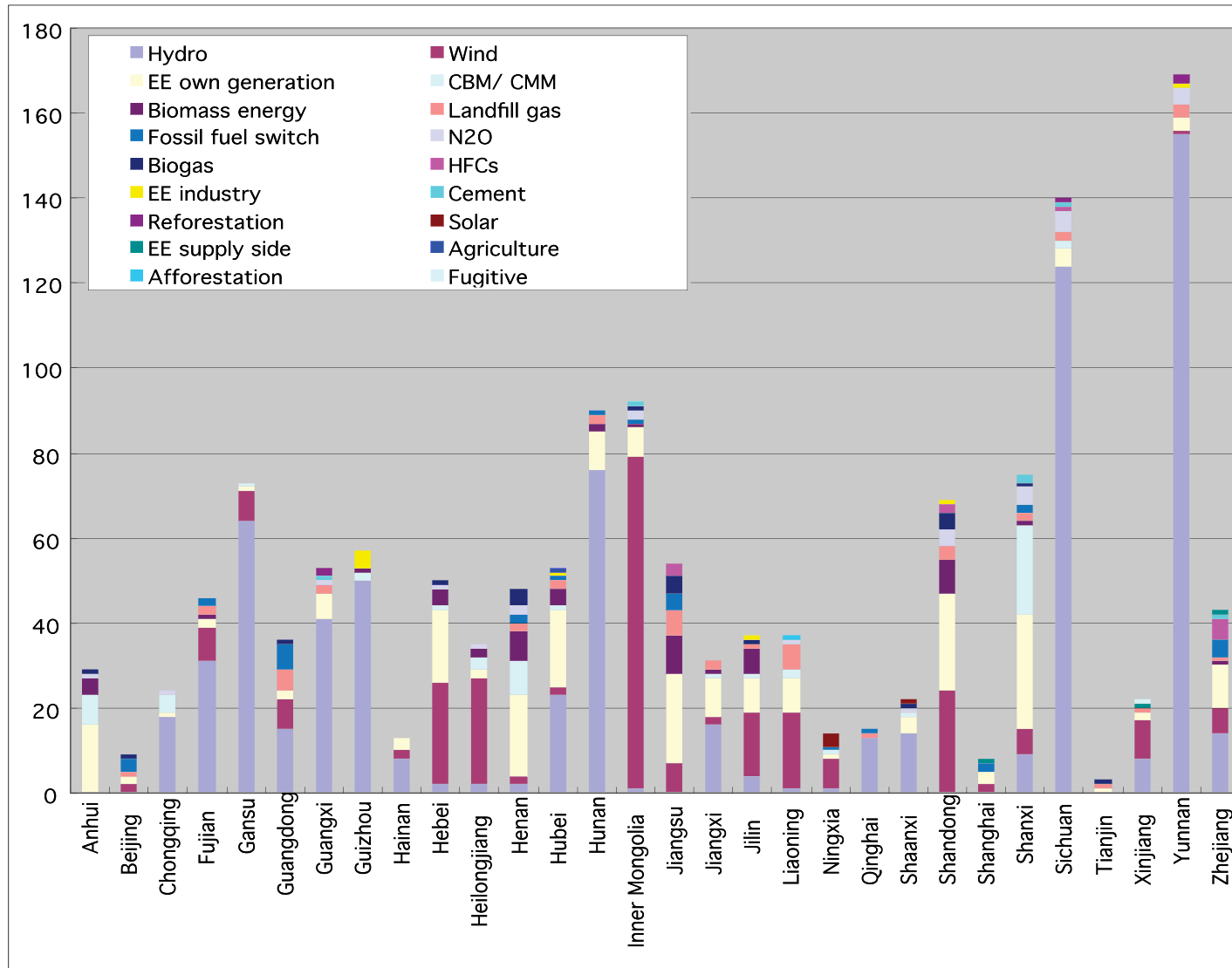
The regional dimensions for the CDM market in China are important:

- a. the availability of natural resources
- b. different policy initiatives/incentives in the provinces support the CDM development at different scale





Number of CDM projects per type and province in China



as of 01/10/2008



Stakeholders in the CDM Market

Project Owners

- ✓ Large-scale state-owned enterprises (SOEs) own 25-30% of the Chinese CDM projects
- ✓ Municipal Enterprises and investment groups (Mes) own 65-70% of the Chinese CDM projects





Stakeholders in the CDM Market

Developers of CDM Projects

Chinese Project Developers (#~160) are:

- ✓ academic institutions
- ✓ regional CDM service centres
- ✓ consultant companies

The top 20 developers produced 45% of the EB-registered projects (55% of annual CERs)





Stakeholders in the CDM Market

Buyers of CERs

- ✓ 80% of the Chinese CERs are bought by EU entities (of which 40% are based in the UK, mostly carbon funds)
- ✓ More than 60% of the CERs will be bought by funds and aggregators, the remaining 40% by banks, industrials, utilities, and multi-laterals and/or governments.





Stakeholders in the CDM Market

Designated Operational Entities (DOEs)

- ✓ The Designated Operational Entities are a bottleneck in the CDM approval procedure (too many projects)
- ✓ DNV and TUEV-SUED are the responsible DOEs for 75% of the Chinese CDM pipeline
- ✓ No Chinese DOE has been approved yet (3 applicants)





Strengths and Challenges of the Chinese CDM Market

Strengths

- ✓ The Chinese CDM market is mature and has a strong political support
- ✓ Incentives make the Energy Efficiency and Renewable Energy CDM market strong
- ✓ Challenges of the Chinese CDM Market

Challenges

- ✓ The investment and financing market are not attractive for international developers (51/49 ownership rule)
- ✓ Regional CDM service centers play a less important role for tapping the resources than expected.





Preferred Sectors and Project Size

- ✓ EU buyers prefer advanced and large CDM status projects (CERs >100 ktCO₂eq./year)
- ✓ “low delivery risk” sectors and methodologies
- ✓ Preferred Sectors are Biogas, Wind, Energy Efficiency and Fuel Switch

