Making the Carbon Market work for Development Finance

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ADB Basics

The Asian Development Bank (ADB):

- Multilateral development finance institution established in 1966
- Poverty reduction is overarching mandate
- Provides lending and technical assistance
- 67 members – 48 of which are from Asia and Pacific region
- 2004-2007 approved lending: US$6-10 billion per year

ADB’s strategic agenda:

- Focuses on pro-poor sustainable economic growth, inclusive social development, and governance for effective policies and institutions.
ADB’s Focus on Addressing Climate Change

- **Role:** catalyze the development and financing of new mitigation & adaptation projects

- **Means:**
  - National/regional capacity building activities
  - Loans, investments and guarantees
  - Project-specific technical support
  - Innovative Finance (incl. market mechanisms)
ADB’s Climate Change Program

**Financing Tools**
- Mobilize Concessional Resources
- Catalyze Private Capital
- Maximize Market Mechanisms

**Mitigation “Thrusts”**
- Advance Energy Efficiency and Low-Carbon Energy Sources
- Enable Sustainable Transport Policy and Application of Efficient Systems
- Promote Improved Urban Sanitation and Reduction of Fugitive Methane Emissions
- Promote Sustainable Land Use and Forestry
- Incorporate Vulnerability Risks into National Development Strategies

**Adaptation “Thrusts”**
- Increase Climate Resilience of Vulnerable Sectors
- “Climate Proof” Projects
- Address Social Dimensions

**“Climate Proof” Projects**

ADB's Climate Change Program

Adaptation

“Thrusts”

Financing

“Thrusts”

Mobilize Concessional Resources

Catalyze Private Capital

Maximize Market Mechanisms

Advance Energy Efficiency and Low-Carbon Energy Sources

Enable Sustainable Transport Policy and Application of Efficient Systems

Promote Improved Urban Sanitation and Reduction of Fugitive Methane Emissions

Promote Sustainable Land Use and Forestry

Incorporate Vulnerability Risks into National Development Strategies

Increase Climate Resilience of Vulnerable Sectors

“Climate Proof” Projects

Address Social Dimensions
Issue

- Kyoto Protocol commitments ending in 2012; no agreed international framework yet on post-2012
  - Lack of long-term price signal to induce developing and developed economies to invest in low-carbon alternatives
  - In the meantime, countries are installing massive amounts of new power/thermal capacity with conventional systems, locking the world into 20-30 years of voluminous GHG emissions
- Lack of investment/equity – carbon market contributing to cash flow of approved projects, but rarely contribute to project financing
Issue 1: Post-2012

End of Kyoto Commitments

Many buyers → Few buyers

Emission reduction portfolio (e.g. 10 year period)
Good News Ahead?

- Increase in number of mandatory schemes – regional, national, sub-national
- Increase in number of voluntary schemes
- Carbon credit becoming common link? – e.g. International Carbon Action Partnership (ICAP)
- Post-2012 global agreement appears likely
- ? What will U.S. position be after elections?
- ? Will major developing countries take on sectoral or intensity based targets?
# Existing and Emerging Schemes

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Start</th>
<th>Transacted Volume</th>
<th>Post-2012</th>
<th>Import Rules for Credits from CDM</th>
</tr>
</thead>
<tbody>
<tr>
<td>The European Union Emission Trading Scheme (EU ETS)</td>
<td>2005</td>
<td>2,061 million tCO2e (2007)</td>
<td>20% or 30% below 1990</td>
<td>Allowed (with limits depending on global agreement)</td>
</tr>
<tr>
<td>Australia National Emission Trading Scheme (AN ETS)</td>
<td>2010</td>
<td>unknown</td>
<td>Target tbd; caps will be set for the first 5 years (until 2015)</td>
<td>limited</td>
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<tr>
<td>New Zealand National Emission Trading Scheme</td>
<td>2008</td>
<td>–</td>
<td>tbd</td>
<td>Allowed (no limit)</td>
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<tr>
<td>The Regional Greenhouse Gas Initiative (RGGI)</td>
<td>2009</td>
<td>–</td>
<td>Target tbd; from 2009 to 2018</td>
<td>10% can be used if prices rise above $10/tCO2e</td>
</tr>
<tr>
<td>California's Global Warming Solutions Act (AB 32)</td>
<td>2012</td>
<td>–</td>
<td>1990 levels by 2020</td>
<td>10% limit (tbd)</td>
</tr>
<tr>
<td>The Western Climate Initiative (WCI)</td>
<td>tbd</td>
<td>–</td>
<td>15% below 2005 baseline by 2020</td>
<td>tbd</td>
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<tr>
<td>The Midwestern Regional Greenhouse Gas Reduction Program (MRP)</td>
<td>2012</td>
<td>–</td>
<td>tbd</td>
<td>tbd</td>
</tr>
<tr>
<td>Switzerland National Emissions Trading Scheme</td>
<td>2008</td>
<td>–</td>
<td>tbd</td>
<td>tbd</td>
</tr>
<tr>
<td>Canadian Offset System</td>
<td>2009 (tbc)</td>
<td>–</td>
<td>20% below 2006 levels by 2020</td>
<td>10% limit</td>
</tr>
<tr>
<td>South Korea Emission Trading Scheme (Voluntary &gt;&gt; Mandatory?)</td>
<td>2009</td>
<td>–</td>
<td>tbd</td>
<td>tbd</td>
</tr>
<tr>
<td>Japan's Voluntary Emission Trading Scheme (JVETS)</td>
<td>2005</td>
<td>82,624 tCO2e (2006-2007)</td>
<td>tbd</td>
<td>allowed</td>
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<tr>
<td>McCain plan</td>
<td>Obama plan</td>
<td></td>
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<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
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<tr>
<td>2050 target: <strong>60% below 1990 levels</strong></td>
<td>2050 target: <strong>80% below 1990 levels</strong></td>
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<tr>
<td>Allowances will “eventually be auctioned”</td>
<td>100% allowances auctioned”</td>
<td></td>
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</tr>
<tr>
<td>Auction proceeds to be used to fund nuclear, CCS and battery development</td>
<td>Auction proceeds to be used to fund clean technologies, energy efficiency and workers compensation</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Unlimited offsets</strong> as a start</td>
<td><strong>Limited use of offsets</strong></td>
<td></td>
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<tr>
<td>Co-sponsored McCain-Lieberman bill</td>
<td>Address deforestation</td>
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<td></td>
<td>Co-sponsored Boxer-Sanders bill</td>
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Source: Point Carbon
Issue 2: CDM is only for large/richer nations?

Source: UNEP Riso Centre
Low hanging fruit – the way markets are supposed to work?

CERs issued in each sector

- HFCs, PFCs & N2O reduction: 75%
- Renewable energy: 12%
- CH4 reduction & Cement & Coal mine/bed: 8%
- Supply-side EE: 4%
- Fuel switch: 1%
- Afforestation & reforestation: 0.0%
- Transport: 0%
- Demand-side EE: 0%
- Supply-side EE: 1%
- Afforestation & reforestation: 0.0%
- Transport: 0%

Source: UNEP Riso Centre
Country/sector limitation: contributing causes

- Focus on “low hanging fruit” – high GWP gas
- Limited DNA and project development capacity
- Restriction in international rules (CCS, REDD, transport?)
- Difficult to develop methodologies for new categories
- Lack of finance for GHG reduction benefits
  - Most buyers offer “pay-on-delivery” contracts
  - Some offer upfront payment but with strict penalties for under-delivery
  - Such schemes do not share project risks – remains almost entirely with project sponsors
- Projects heavily skewed towards countries/sectors already with capital and/or favorable to foreign direct investment
CDM Concept

Industrialized Country
(Annex B)

Entity A
✓ GHG Emissions

Developing Country
(non-Annex B)

Entity B
✓ Project Activity
✓ Emission Reduction

① Finance
Technology
(Capacity Building)

② Carbon Credits
Industrialized Country (Annex B)

Entity A
✓ GHG Emissions

Developing Country (non-Annex B)

Entity B
✓ Project Activity
✓ Emission Reduction

① Carbon Credits

② Payment
ADB’s Attempt – Future Carbon Fund

- Purchase **post-2012 carbon credits** from projects proposed today
- Pay upfront, to help developing countries reduce the upfront capital constraint of installing clean energy systems
- Provided to project developers/sponsors who receive ADB financial support and CDM-specific technical assistance
- Associated costs and risks are largely reduced due to “piggy back” design and strategy
  - General technical, financial and legal due diligence carried out by ADB main operations to process/approve financing
Turning Cash Flow into Financing

ADB Modality

1. Tech Asst
2. Carbon Credits

Project phase: Development

Year: 0 1 2 3

Standard “Pay-on-Delivery”

1. Carbon Credits
2. $/€

Cash Flow

Year: 4 5 6 7
Integrate CDM into Bank Processing
Lower CDM
Transaction Risk/Costs

General Project Risk

Incremental CDM Risk
Concessional Resources

- **Climate Investment Funds – Clean Technology Fund**
  - Supported by: Japan, U.K., U.S.
  - World Bank Group as Trustee, Implemented by Multilateral Development Banks
  - Target: $5 billion
  - Grant for preparation; concessional loan for investment

- **Global Environment Facility**
  - Climate Change Focal Area
  - $250 million/year; mainly for capacity building, project preparation
Additional Market Schemes

- Markets to improve local air pollution
  - Trading of SO2 and NOx permits; some measures can simultaneously reduce CO₂ emissions
  - US market operational since 1995
  - Proposed in China – support from ADB and other international agencies

- Markets to advance energy efficiency
  - UK “White Certificates”
  - Now proposed in India

- Markets to promote energy security?
THANK YOU!!

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