Reflections on alternative emission reduction mechanisms

Catherine Martin-Robert on behalf of Bruno Vanderborght

10th Annual Workshop on GHG Emission Trading
Paris, 20 September 2010
The objective of any alternative mechanism is …

To accelerate the pace and extent of energy and CO$_2$ efficiency improvement …

… by different sectors …

… in developed, emerging and least-developed economies …

… beyond „business-as-usual“ progress
Alternative names come, are understood in different ways … and go …

- No lose targets
- Offsets
- Sectoral Approach
- Sectoral Initiatives
- Sectoral Agreement
- Sectoral Benchmarking
- Sectoral Crediting Mechanism
- Etcetera *

* This is not the name of an alternative mechanism
### Sectors, harmonized MRV & Performance metrics

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Power</th>
<th>Industry</th>
<th>Transport</th>
<th>Buildings</th>
<th>Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Sectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cement</td>
<td>Aviation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steel</td>
<td>Maritime</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aluminum</td>
<td>Land</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refineries</td>
<td>Public</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemicals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paper</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- (sub)sectoral harmonized MRV
- Harmonized Performance Metrics
- Regionally differentiated levels
Principally three market systems can be considered, each with its “environmental stringency level”.

<table>
<thead>
<tr>
<th>Cap &amp; Trade System (ATS - ETS)</th>
<th>Baseline &amp; Credit System (BCS)</th>
<th>One-way Credit Trading: (CDM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governmental allowance allocation or auctioning</td>
<td>Credit generation by Baseline &amp; Crediting</td>
<td>Credit generation by projects</td>
</tr>
<tr>
<td>Absolute Cap to total industry emissions</td>
<td>No Absolute Cap</td>
<td>No Absolute Cap</td>
</tr>
<tr>
<td>Mandatory system with</td>
<td>Mandatory system with</td>
<td>Voluntary system</td>
</tr>
<tr>
<td>Compliance obligation</td>
<td>Compliance obligation</td>
<td>No compliance obligation</td>
</tr>
<tr>
<td></td>
<td>No additionality requirement</td>
<td>Demonstration of Additionality</td>
</tr>
</tbody>
</table>

### Regional Sectoral Benchmark
- **Installation / Project**: Buy / Reduce, Sell
- **Buy / Reduce**: Sell
- **No obligation**: Sell

### Installation / Project
- **Buy / Reduce**: Sell
- **Sell**: Sell
- **No obligation**: Sell
Baseline and Credit System

Gross CO2 emission per tonne cementitious (Company level)

National MRV is the first step!

Gross CO2 emission per tonne cementitious (Company level) (1% - 99%)
Linear regression (10% - 90%)
Weighted average
In a global framework, geographical regions gradually evolve into more stringent policies & trading systems as a function of time and of socio-economic development.

The “severity” of regulatory systems:

<table>
<thead>
<tr>
<th>Region \ Time</th>
<th>&lt; 2012</th>
<th>&lt; 2020</th>
<th>&lt; 2030</th>
<th>&lt; 2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annex 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G5 +</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPEC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing countries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Least Developed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

G5 + = China, India, Mexico, Brazil, South Africa and Singapore, South Korea
Key success factors of any system include:

- Sectoral Harmonized Monitoring & Reporting Methodology
- Capacity building
- Mandatory reporting to independent database & registries
- Sectoral harmonized MRV and performance metrics (benchmark metrics), regionally differentiated quantification (benchmark values)
- Regulated market mechanism
- Supply and Demand of credits or allowances
- Multi sub-sectoral
- Credits at company / installation level (not to sector federation)
- Competition
- Bi- or multi-lateral agreements between countries
Baseline and Credit

National MRV is the first step!