Designing, promoting and maintaining CMM projects while the carbon market reboots

A panel discussion
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Contents

- A review of global carbon markets and factors which will affect the dynamics
- The status of CMM & VAM in China
- New financing methods
- New market mechanisms for achieving future scale and net emission reductions

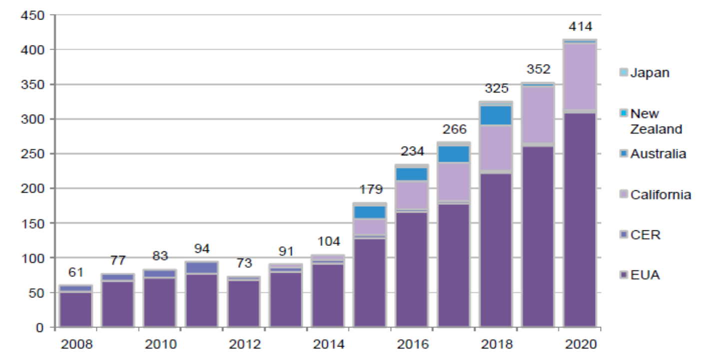
Global carbon markets

- **For the past 10 years, CDM has dominated global carbon markets**
  - Emission reduction projects in developing nations selling carbon securities to developed country polluters
  - >7,000 projects registered; 1.5 billion tonnes CO_2 abated; >$356bn of clean energy investments
  - >300 CDM methane projects issued CERs and some 1,200 initiated but not implemented

- **CDM offset prices have fallen from more than 20USD/t CO_2 to close to zero**

- **National and regional emissions trading are taking off all over the world**
  - Mature schemes in EU, North East & Mid-Atlantic States (RGGI) and New Zealand
  - Initiatives started in California; Quebec; 7 provinces in China; South Korea; Australia; Ukraine
  - Other countries proposing national ETS schemes include China, Brazil, Chile
  - Offsets key to maintaining reasonable prices to indust

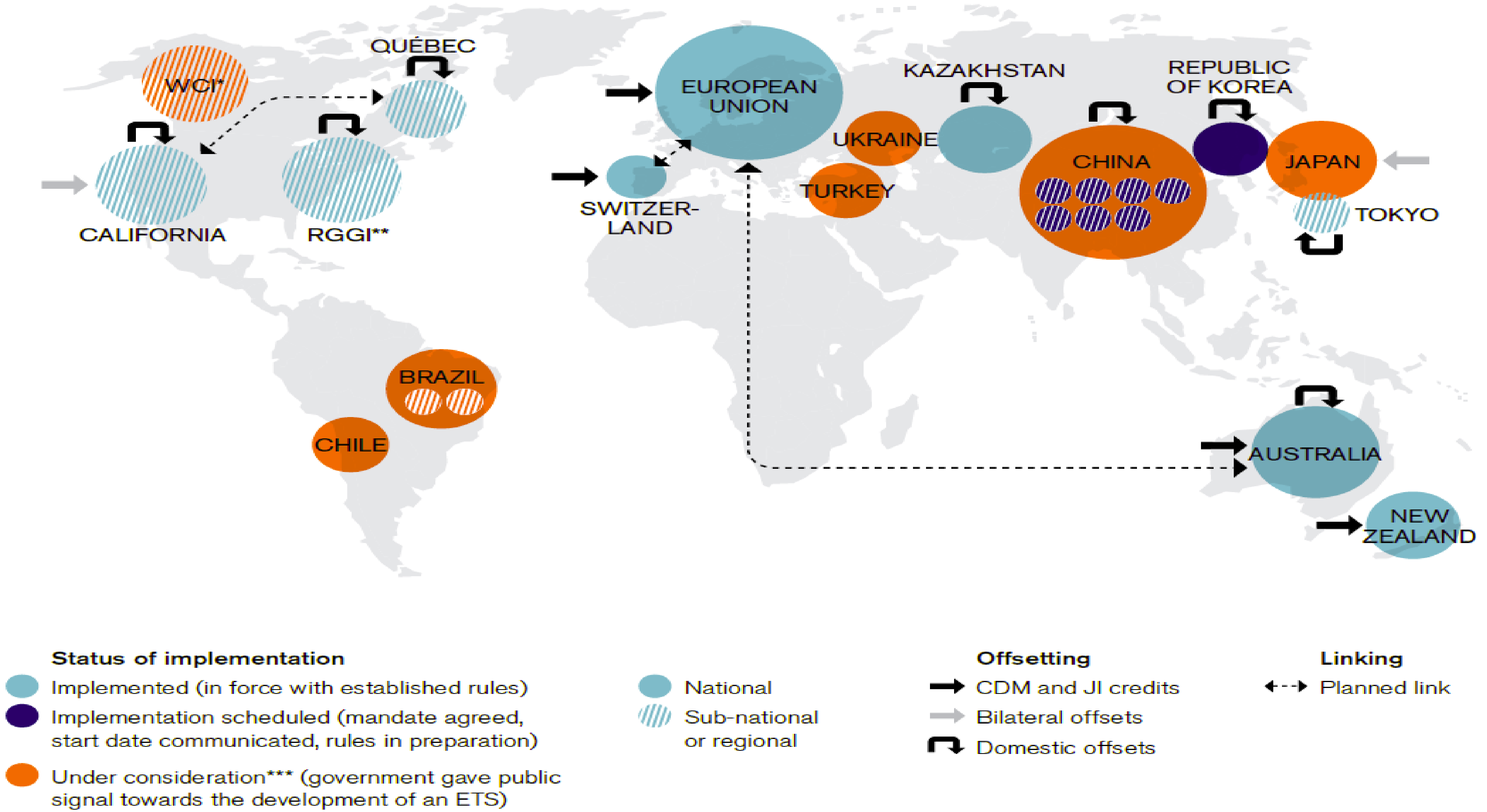
Projected total market growth
is exponential to US$550 billion by 2020



Assumes: EU 21% target in 2020 on 2005 levels, continuation of CDM, oneway linking between EU and Australia, capped markets in South Korea, Japan, Australia, New Zealand, California, Japanese volume includes bilaterral offsets,

Bloomberg New Energy Finance

Emissions trading is here to stay



Source: World Bank (2013)

The CER market is currently dislocated

- **Thousands of stand-alone projects across more than 100 countries, almost none of them currently producing offsets because of low prices**
  - Cost to issue 1 offset (Euro 0.50 to 1.00) > spot price (Euro 0.50)

- **Many projects that were in early development have been stopped or are on hold**

- **30% of total CERs come from projects that have offsets which are no longer admitted to the EU ETS, their largest market through 2012**

- **Some CDM projects are switching to other standards and markets**
  - Voluntary market including retail and voluntary ETS
  - Gold Standard
  - Others

- **Offsets supply appears to be >200% of demand**

Market dynamics could change due to possible developments

1. Demand from nascent carbon markets in China – 7 pilots (Chinese VERs), national scheme from 2015 (2020?); offsets from China CMM/VAM projects potentially allowable; CDM projects (not issuing) can switch
2. A change in India's approach to climate change negotiations
3. An increase in the EU ambition to 30% (2020) or 40% (2030)
4. A push by the US to ensure the market plays a key role in international climate change negotiations
5. Demand for offsets from the aviation and shipping industries
6. A stabilization fund launched by multilaterals such as the World Bank, the IMF and / or the Green Climate Fund
7. A focus by the UNFCCC on investing in instruments they already have, i.e. the Clean Development Mechanism

China CMM & VAM

- 70-80% of gas released by mining is emitted as VAM
- Total of 522MT CO_2 equivalent released each year – 418Mt VAM, 104Mt captured CMM (half used)
- If ALL mitigated represents about 7.5% of the CO_2 produced by coal combustion
- 82 CMM & VAM projects registered under the CDM
- 3 SSR CMM co-generation projects continuing – power (c27MW), heat and flaring, 1m ERS/year; additional project phases to be financed locally
- Interest in technology for improving borehole sealing and maintaining gas quality from coal companies – need for continued technology transfer
- VAM projects have stalled but still some interest in VAM heat or power by mining groups – number of projects likely to be low
- China government incentives for clean power generation could be increased
- New CMM projects likely but cost saving could compromise efficiency and standards; no barrier to use of low concentration methane; no incentive for flaring on new projects so more gas will be vented

New Financing Methods: RBF – results-based financing

World Bank: pay-for-performance auction facility for methane

- **Use existing tools and standards to quantify**
- **"Put option" contracts (bankable?)**
- **CMM & VAM mitigation identified as one of 7 key targets**
- **Could help to kick start stalled CDM CMM & VAM projects**
- **Increases price certainty to the private developer (in exchange for increased development and delivery risks)**

New Market Mechanisms

- Bilateral offset credits – project based, no major institutional structures required
- Sectoral crediting – credits awarded if emissions from a sector are kept below a predefined level
- Sectoral trading - allowances issued ex ante based on a sectoral target with penalty for not achieving
- NAMA/policy crediting (Nationally Appropriate Mitigation Action)
- Net avoided emissions – credits for not exploiting fossil fuels

NMM:

- Allow governments to incentivise emission reduction (not allowed under CDM)
- Avoid additionality complexity
- Invoke policies appropriate to sector eg., feed-in tariff and green credit lines for energy production; carbon tax for industrial energy use
- Baseline could be more stringent than the BAU with no carbon credits between BAU and baseline; carbon credit financing below so achieves global emission reductions

Conclusions and discussion topics

- Carbon markets will recover but the timing is uncertain
- To achieve significant anthropogenic methane emission reductions CMM flaring (of unused gas) and VAM mitigation are essential
- CMM recovery, utilisation and mitigation needs a sectoral approach to achieve scale at national levels
- The World Bank pay-for-performance facility for methane mitigation could help to resurrect stalled CDM CMM & VAM projects and could have a longer term role in project and NAMA financing
- New Market Mechanisms could be helpful in the longer term if they achieve international support
- Globally, many coal mining companies are not engaging in the sustainability debate and need to be brought on board
- AHGE could provide guidance on policies to incentivise CMM/VAM utilisation and mitigation