



*Carbon Capture &
Storage Association*

A Business and Industry Perspective

Based on a CCSA Paper:
**“CCS in an International Post-2012
Climate Change Agreement”**

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IEA CCS Regulators Webinar
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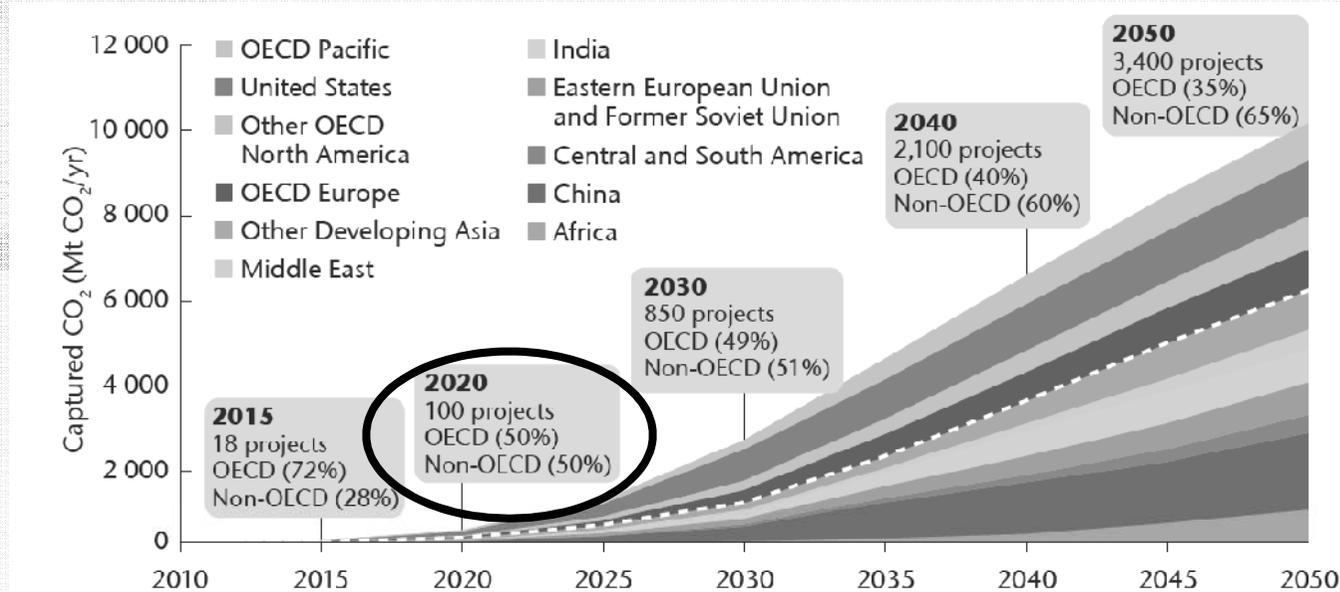


Presentation overview

- Deployment requirements for CCS
- International regulation of CO₂
- International policy outcomes
- What Copenhagen delivered

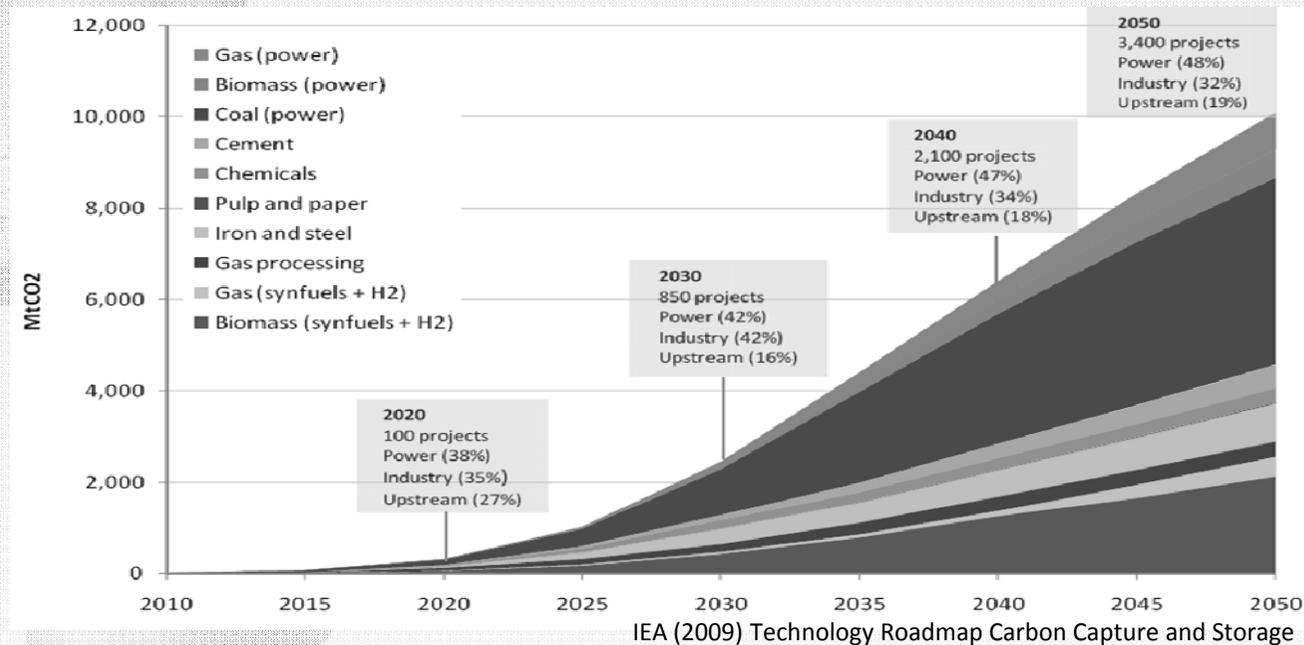
CCS needed in developing countries

IEA (2009) Technology Roadmap Carbon Capture and Storage



- Rapid deployment in developing countries to meet the 2°C limit in Copenhagen Accord
- CCS currently not eligible under the Clean Development Mechanism (CDM)
- Developing countries have no access to a CCS support mechanism (>140 countries)
- Perception that CCS not considered a valid technology by the UN

CCS deployment in multiple sectors



- CCS must be deployed in multiple CO₂-intensive sectors; not just coal-power
- The only scaleable, abatement technology for a number of CO₂ intensive sectors (i.e. cement, Iron and Steel, etc)
- *Considerable variation in costs between sectors*

International regulation of CCS

Provide assurance of storage security;

- Appropriate site assessment and selection
- Assessment and management of leakage risk
- Monitoring, reporting and verification of stored CO₂

Appropriate host country legal framework;

- Allocation of responsibility for any CO₂ leakage (local and global)
- Ex-ante agreement on long-term liability
 - Storage site operator responsible for operation and post-closure
 - Transferred to host country at point where no realistic expectation of any leakage

Public and political awareness;

- Opposition to using public funds to support CCS as “diverts” investment in renewables
- Concerns that CCS must first be demonstrated in developed countries

Model for international CCS regulation

- *IPCC 2006 Guidelines for National Greenhouse Gas Inventories* provide the framework for managing the selection and MRV of CO₂ storage sites
- International assessment system for overseeing projects
 - Accreditation of existing or new certification companies
 - International standard developed by reputable international body (GCCSI, IPAC?)

Supporting CCS in developing countries

1. CCS must be recognised in the global carbon market
 - Sufficient to incentivise low-cost CCS opportunities
 - Reduces the financial gap for higher cost applications (i.e. power, iron and steel)
2. Barriers to early demonstration require support in addition to that provided by carbon market
 - High costs at the demonstration phase for a number of sectors
 - Tendency for very large scale
 - Capacity building

CCS in Copenhagen

Four negotiating bodies discussed issues related to CCS;

- CMP – Conference of the Parties serving as a Meeting of the Parties to the Kyoto Protocol
- AWG-KP – Ad Hoc Working group on Further Commitments for Annex I Parties under the Kyoto Protocol
- SBSTA – Subsidiary Body for Scientific and Technological Advice
- AWG-LCA – Ad Hoc Working Group on Long-term Cooperative Action

CCS CDM negotiations (1/3)

- Kyoto Protocol Parties (CMP) (L.10/CMP5)
 - Should CCS be included in the first commitment period of the Kyoto Protocol (2008 – 2012)?
 - Identified outstanding issues (see below)
 - Request Party submissions on outstanding issues (March 2010)
 - Request SBSTA to work on outstanding issues (June 2010)
 - Report back to CMP, Dec. 2010 with “View” to make a decision

CCS CDM negotiations (2/3)

- Extension to the Kyoto Protocol (AWG-KP) (L.15/AWG-KP10)
 - Should CCS be included in the second commitment period of the Kyoto Protocol (2013 – c.2020)?
 - Conclude Dec. 2010

Currently two options:

1. CCS shall not be eligible under CDM due to unresolved concerns
2. CCS shall be eligible under CDM in 2nd and subsequent periods
 - SBSTA to develop procedures to address outstanding issues
 - These to be adopted in Dec. 2010 or Dec. 2011

CCS CDM negotiations (3/3)

- Subsidiary Body for Scientific and Technological Advice (SBSTA) (L.20/SBSTA31)
 - Continue consideration of this matter at next session (June 2010) based on draft text
 - Refers back to decisions made in Nairobi (CMP2)
 - Procedural decision to enable possible CMP / AWG-KP decision
- Subsequently given new mandate by CMP
 - Will work on outstanding issues in June 2010

Outstanding issues

Issues to be resolved before CCS can be included in CDM;

- Non-permanence, including long-term permanence;
- Measurement, reporting and verification;
- Environmental impacts;
- The definition of project activity boundaries;
- Issues of international law;
- Issues of liability;
- The potential for the creation of perverse incentives for increased dependency on fossil fuels;
- Safety;
- The absence of insurance coverage to provide compensation for damage to the environment and to the atmosphere resulting from storage site leakage.

Alternative CCS support mechanisms under UNFCCC

The new climate agreement *may* provide new opportunities to support CCS (Concludes Dec. 2010) (AWG-LCA8):

Climate Fund (L.7/Add.2/Rev.1)

- Support mitigation activities, i.e. projects, programmes, technology development and transfer, etc

Enhanced Action on Technology (L.7/Add.3)

- Technology cooperation, Technology Mechanism to assess needs & address barriers, est. Technology Centres & Networks

Nationally Appropriate Mitigation Actions (NAMAs) (L.7/Add.5)

- Developing countries submit proposed mitigation actions for which they require support (i.e. central mechanisms or bi- and multi-lateral funding)

Market-based mechanisms as support for NAMAs (L.7/Add.8/Rev.1)

- Help to both reduce mitigation costs and assist developed countries meet targets

*Time for any new actions to become operational unclear
Estimates of between 3 - 10 years for new market mechanisms*

Conclusions

- Post-2012 agreement should recognise the GHG reduction potential of CCS
- CCS must be included in a market-based mechanism
- Need public financing for higher cost applications of CCS
- A robust international regulatory system for CCS is required