

Carbon capture storage and International Negotiations

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Outlines

CCS and International Negotiations

- **CCS and the Kyoto Protocol**
- **CCS and CDM/JI mechanisms**
- **CCS and the EU-ETS**
- **A Post Kyoto agreement ?**



CCS technology dedicated against climate change was not fully recognized in the Kyoto Protocol and in the initial European Emission Trading Scheme, but...

Some discussions at international and European levels are under way and results are expected during 2009...



Current status of CCS projects

- **no appropriate accounting categories under the KP (IPCC guidelines for National Greenhouse Gas Inventories) for fugitive emissions and removals of CO₂ from CCS projects**
- **no CMP agreed guidance for allowing CCS as CDM project activities**
- **CCS projects not fully included in the current (2008-2012) EU-ETS (except Art. 24)**



CCS and Kyoto Protocol

CCS and national inventories – IPCC recommendations

- **Parties use Revised 1996 Guidelines for National Greenhouse Gas Inventories of the IPCC to estimate and report emissions.**
 - No appropriate categories for fugitive emissions from CCS
- **2006 IPCC Guidelines for National Greenhouse Gas Inventories address CCS projects (Chap. 5)**
 - CCS addressed
 - not yet come into force !



CCS and Kyoto Protocol

CCS and national inventories – IPCC recommendations

■ 2006 IPCC guidelines:

- **emissions from fossil fuel use along CCS chain**
 - reported in the national inventories as energy use (in the stationary or mobile energy use)

- **fugitive emissions (transport, injection and storage)**
 - reported in "CO2 Transport, Injection and Geological Storage"
 - 4 systems: Capture and compression, Transport, Injection and Storage system



Address by Yvo de Boer, Executive Secretary UNFCCC in Vienna, 19 March 2009

- "... CCS is still expensive. If CCS is to be employed at a large scale it requires funding that closes the cost-gap between energy production with and without CCS.
- Discussions are under way on whether the continuation of the carbon market beyond 2012 could enable CCS to be included in the Kyoto Protocol's Clean Development Mechanism (CDM). The Executive Board of the CDM has been tasked with assessing the implications of including CCS under the CDM."



CCS and Kyoto Protocol

CDM/JI and CCS

- **Two CCS/CDM projects have been submitted to the UNFCCC EB:**
 - "White Tiger "project (Sept 2005)
 - "Bintulu LNG" project (January 2006)
- **no agreement on the methodology proposed reached in COP/MOP4 (Dec 2008) : boundary, leakage and permanence.**

CCS and Kyoto Protocol

CDM/JI and CCS issues

- **Main physical leakage issues:**
 - Site selection: nothing specifically defined
 - Monitoring methods for leakage emissions: adaptive process
 - Acceptable level of leakage emissions : what reality ?
- **Main permanence and liability issues:**
 - accounting framework and long term liability after the crediting period
- **Main project boundary issues**
 - international waters, several projects and one reservoir, migration of CO₂ from one country to another after injection

CCS and Kyoto Protocol

CDM/JI and CCS

- **Decision on guidance on the CCS in the CDM at COP/MOP 2009 in Copenhagen:**
 - security of storage: what leakage rate ?
 - site selection criteria and monitoring guidelines to be defined
 - project boundary: several projects and one storage, crosses national boundaries : need of collaborative monitoring and reporting
 - long term accounting and liability issues
 - ...

CCS and EU-ETS

CCS and revised EU-ETS Directive

- **Current EU-ETS Directive (2003/87/CE): Phase 2**
 - CCS excluded but MS have an opt-in option under Art. 24. CO₂ stored will be credited as not emitted.
- **Revised EU-ETS Directive :CCS & EU-ETS Phase 3**
 - CCS is listed in Annex I and so fully included in EU-ETS from 2013 onwards
 - capture will be regulated under IPPC Dir., pipeline transport under Environmental Impact Assessment Dir.

CCS and EU-ETS

CCS and revised EU-ETS Directive

- **no free allocations for CCS whatever the sector**
 - **CO2 captured and stored is considered as not emitted into the atmosphere thus no allowances are required**
- **2013 onward: no free allowances for electric sector but auctioning will be the rule.**
 - **in the electric sector : or invest in CCS or buy allowances by auctioning**
- **if CO2 leakage appear during the EU-ETS phase 3 : restitution of allowances is required.**



CCS and EU-ETS

- **what is missing ?**
 - **a CCS monitoring & reporting guidelines in the EU-ETS in line with CCS Dir. obligations :**
 - **fugitive emissions of CO2 at injection facilities, volume of CO2 injected, CO2 stream composition, pressure and temperature...etc.**
 - **to clarify the aids at European and national levels to fill the cost gap between with and without CCS**
 - **transposition in national legislation of the Directives EU-ETS and CCS**



CCS and International Negotiations

- **CCS and the Kyoto Protocol : 2006 IPCC**
- **CCS and CDM/JI mechanisms : COP/MOP Dec2009 ?**
- **CCS and the EU-ETS : Phase III – national transposition – M&R guidelines**
- **A Post Kyoto agreement ?**



Post Kyoto agreement ?

- **Bali (2007) – a decision to negotiate**
 - Bali Action plan mandate to finish negotiations on a global climate agreement by 2009 to enter into force 2013
 - Process via two negotiation streams
 - AWG-KP ("Kyoto track")
 - AWG-LCA ("Convention track")
 - Copenhagen (2009) – Deadline

- **Post – 2012...**
 - targets ?
 - Role of the US ? advance developing countries ? carbon capture and storage ?
 - no clarity before last days in Copenhagen (Dec 2009)