EU legal framework and funding of CCS demonstration projects

6th CO2 GeoNet Open Forum

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Introduction

- Regulatory framework: CCS-Directive
- Funding for demonstration projects: NER 300
- EEPR, Project Network
CCS-Directive

- legal framework for the environmentally safe geological storage of CO2
- capture and transport regulated through amendments of existing legislation and at national level
- removes barriers to CCS in existing legislation
- Member States determine whether and where CCS will happen on their territory
- to be transposed by 25 June 2011
Key Elements of CCS Directive:

- site selection and exploration
- storage permits
- CO2 stream composition
- monitoring and reporting
- closure and post-closure obligations
- transfer of responsibility
- financial security and financial contribution
- emissions captured and stored recognised as not emitted under EU-ETS
State of play of implementation:

- Reporting questionnaire published on 11 Feb 2011, MS report on implementation due within 6 months
- Transposition deadline 25 June 2011, COM preparing for conformity check
- COM also preparing for review of draft storage permits (1 to 2 expected in 2011)
- Continued dialogue with MS in Information Exchange Group, last meeting on 16 March 2011
- Guidance documents (see next slide)
GDs to support coherent implementation of the CCS-Directive across EU

GDs published on CCS website on 31 March 2011:

- GD 1 - CO2 Storage Life Cycle Risk Management Framework
- GD 2 - Characterisation of the Storage Complex, CO2 Stream Composition, Monitoring and Corrective Measures
- GD 3 - Criteria for Transfer of Responsibility to the Competent Authority
- GD 4 - Financial Security and Financial Mechanism
**NER 300**: 300 million allowances reserved in new entrants reserve (NER) of EU-ETS for the financing of commercial-scale CCS and innovative RES demonstration projects, Art. 10a(8) EU-Emissions Trading Directive

★ 300 million allowances (depending on carbon price, worth some €4-5 billion) will be distributed through two rounds of Call for proposals (200/100 million allowances)

★ Wide range of technologies: at least 8 CCS and at least 34 RES projects

★ Geographically balanced locations: 1 to 3 projects per MS
★ 50% of relevant costs will be funded, per project max.  
15% of the total number of allowances

★ NER 300 not part of EU budget – can be combined with other instruments, including EEPR and Structural and Cohesion Funds

★ Implementation at EU level, but with strong role for Member States, and with support from the European Investment Bank
Launch of first Call for proposals on 9 November 2010
Project Sponsor phase completed on 9 Feb 2011
According to reports from MS, 153 proposals received, including 22 CCS proposals (see next slide)
MS now have until 9 May 2011 (today!) to check eligibility of projects and submit those eligible projects they wish to support to EIB for further assessment
Award decisions for the first tranche envisaged for the second half of 2012
## TOTAL NUMBER OF CCS PROJECTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
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<tbody>
<tr>
<td>Power generation: pre-combustion 250 MW [CCSpre]</td>
<td>6</td>
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<tr>
<td>Power generation: post combustion 250 MW [CCSpos]</td>
<td>8</td>
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<tr>
<td>Power generation: oxyfuel 250 MW [CCSoxy]</td>
<td>4</td>
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<td>Industrial applications implementing (a) CCS on refineries with 500 kt/y stored CO2 from one or more sources within the refinery; (b) CCS application to cement kiln with 500 kt/y stored CO2; (c) CCS application for primary production routes in iron and steel production with 500 kt/y stored CO2; or (d) CCS application for primary production routes in aluminium production with 500 kt/y stored CO2 [CCSind]</td>
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EU has set up a regulatory framework to ensure the environmentally safe geological storage of CO2

Funding for large-scale demonstration programmes provides important stimulus for the development of CCS

NER 300 unprecedented in scope and magnitude (covering CCS and RES demonstration projects, €4-5 billion)

European approach will ensure highest possible quality of demonstration projects in terms of technological and geographical balance
EEPR and Project Network
★ €1bn for large-scale CCS demos
  ➤ Max. €180m per project for incremental CCS investment costs
★ 6 projects have signed grant agreements in 2009/10
  ➤ Jänschwalde, Hatfield, Porto Tolle, Rotterdam, Bėłchatów, Compostilla
EEPR projects - locations

- Hatfield, UK
  - 900 MW

- Compostilla, ES
  - 323 MW

- Porto Tolle, IT
  - 250 MW

- Jänschwalde, DE
  - 300 MW

- Belchatów, PL
  - 250 MW

- Rotterdam, NL
  - 250 MW

Select projects:
- IGCC
- OXY
- PC
Established in 2010 to generate early benefits from a coordinated European action on CCS demonstration projects.

Current members: EEPR projects - but CCS demonstration projects fulfilling minimum qualification criteria are invited to join the Network.

Objectives:
- Identify best practices and enable knowledge-sharing amongst projects
- Create a common EU identity for Network members
- Leverage experience of projects in order to gain public confidence
- Promote CCS and cooperation with third parties/countries

Implementation:
- Meetings, in part on-site
- Regular reporting and dissemination
- Advisory Forum for stakeholder guidance
More information

- **CCS website:**
  http://ec.europa.eu/clima/policies/lowcarbon/ccs_en.htm
- **CCS mailbox:**
  CLIMA-CCS-Directive@ec.europa.eu

- **NER 300 website:**
  http://ec.europa.eu/clima/funding/ner300/index_en.htm
- **NER 300 mailbox:**
  CLIMA-NER300@ec.europa.eu

- **EEPR website:**
  http://ec.europa.eu/energy/eepr/index_en.htm
- **Project Network website:**
  http://www.ccsnetwork.eu/

Thank you for your attention!