

Carbon Capture and Storage: Views by the European Electricity Industry

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CCS: background

- CCS: increasing attention by policy-makers in Europe over the past two-three years
- EU “Energy Package” of 2007
 - Support for R&D to bring CCS to commercial availability by 2020, if possible
 - Support for demonstration plant
 - Support for mechanism to stimulate the construction of demonstration plants
 - Possible obligation of CCS from 2020?

Policy to enable CCS

- EURELECTRIC vision: low-carbon electricity production by 2050
- Striving for availability of CCS technologies by 2020
- Prerequisite for CCS: improved plant efficiency
 - Capture technologies energy-intensive
 - Loss of up to 12 %-points in plant efficiency
- Full support for 10-12 demonstration plants
 - NOTE: demo is more than pilot project!
 - Large-scale: 300-500MW

Policy to enable CCS (2)

- CCS to constitute a central part in FP7
- Public acceptance: joint work needed by industry and governments
- CCS only a part of the solution
- No mandatory CCS: market must decide the technologies
- EU-ETS must enable CCS to develop (question of allocation)
- Legal framework for storage: capture makes no sense if storage not available!

Urgent answers needed: funding

- **Short term**: CCS demo plant funding
 - 10-12 demo plant (500MW each?)
 - Assuming 2000 / kW -> total cost 10-12 bn (out of which perhaps 1/5 is the “risky” part)
 - European R&D funds insufficient (max 200 m € for capture technologies) -> bulk of investment will have to come from electricity industry
 - Funding mechanism needed to stimulate demo plants
- **Long term**: market framework for CCS plant
 - EU-ETS must recognise CCS
 - incentives to build and operate CCS must come from CO2 price

Urgent answers needed: definitions

- **“Demonstration plant”**
 - No agreement on what is meant
 - Industry view: demonstration plant is full-scale, not a small pilot installation
- **“Capture-ready”**:
 - No agreement at the moment what capture-ready means

Urgent answers needed: regulatory framework

- Liability issues
- Relation to waste and water regulation
- Recognition in EU-ETS