CO2 for EOR as an early opportunity to kick off CCS
Policy and regulatory recommendations made in the ECCO project

CCS Forum
15. November 2011

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ECCO project

- 7 EU FP – 3 years
- Objective – link CO2 sources with CO2 storage sites + investigate how to deploy early opportunities for CCS as CO2 for EOR
- Bellona's role – Leader of Working package on regulations

  - Selected issues : financial incentives and regulations for CO2 for EOR projects.

CO_2 for EOR as an early opportunity for CCS

- Multi benefits of EOR (EGR)
  - Benefits for oil field operator (as higher recovery rate, delay decommissioning fees…)
  - Benefits for the State (as higher tax revenues, better management of natural resources…)
- CO_2 for EOR can kick off CCS by stimulating the entire value chain
- Current lack of CO_2 for EOR projects in Europe
  - Not economically viable - the value created by the delivered CO_2 does not justify the costs of capture and transport (and subsequently to create a market)
- EU ETS scheme not strong enough:
  - does not deliver CCS, nor EOR projects due to current low carbon price
- Need for specific incentives for CCS for EOR?
  - Principle: preferable to have same incentive scheme applicable to all CCS projects, including CCS for EOR at least in the medium to long term
  - In the short term, introduce specific EOR incentives to kick off projects. Incentives to be limited in time to avoid unnecessary delay towards low carbon society
  - Financial and regulatory incentives.
- But short window of opportunity - Ensure proper timing

Stimulate CCS for EOR through tax incentives

Recommendations applicable for all tax incentives:

- Applicable only for a kick-off period – until sufficient EOR projects have created a market for CO_2 storage.
- Should reflect cost of capturing/transporting and storing each tonne of CO2 minus the benefits of EOR/EGR.
- Be qualified as storage operator
- Need to avoid accumulation of subsidies.
- Verify compliance with State aid rules Basics

Tax exemption/reduction	Grant tax exemption or reduction for all oil produced through CO_2 for EOR Alternatively only for a specific volume of oil produced through CCS for EOR	Consider risk that oil companies under-estimate their resources recoverable without CO_2 in order to maximize profits (tax optimization)
Period of depreciation	Shorten depreciation time on investments directly tied to the use of CO_2 for EOR	Gives lower taxable income in the period from initial investment to full write down and consequently a lower up-front taxation
Tax credit	A tax credit could apply to all costs associated with installing the CO_2 flood, CO_2 purchase and CO_2 operating costs	With a tax credit of 15% granted, the remaining 85% of qualifying costs would be depreciated normally
Modification of the tax basis	Base taxation on the achieved oil price in the market place rather than on an averaged fixed price	Enables companies to hedge their production and reduce further risk by selling oil on forwards contracts without being taxed based on a potentially higher average fixed price assessment than actually achieved

Stimulate CCS for EOR through regulations

- High margin in the oil and gas industry could justify regulatory requirements aiming at incentivizing the use of CO_2 for EOR projects
- Integrate EOR in the Plan for Development and Operation (POD/PUD)
  - Set a condition in the POD that CO_2 injection for EOR has been assessed and considered
  - Require, when applicable a condition of “EOR ready” for new fields and “EOR retrofit” for existing fields
- Earmark revenues – creation of a fund
  - Earmark additional revenues to the state arising from the increase of oil produced through EOR for further investments in CCS (financing infrastructure, research osv, site selection, provide loan guarantees) –
  - in addition to tax incentives ?

Other main recommendations to stimulate CCS (in general)

- Organisation of the value chain:
  - Assess the potential effects of vertical integration on competition
  - Consider the establishment of independent TSO
  - Third party access
    - Clarify the circle of those entitled to require access to transport and storage network
    - Use approach of EU gas legislation
    - Stimulate TPA through the assessment of the PDO
    - Clarify TPA to buffer locations
- Long term liability issues/transfer
  - Favour the transfer of all liability, including liability to third parties
  - Define mechanism to avoid the delay of transfer to the state
- Trust Fund to mutualise responsibility of storage operators
- Cross border issues:
  - Define guidelines for allocation of risks between countries in cross border projects (cross border pipelines, cross border storage sites, and ships)

Clarity and pre-visibility required from investors

Clear policies

Financial **support** necessary for at least the first movers

Avoid multiplication of subsidies to fossil fuel

To enable support schemes to be effective, **address access to transport and storage network**

Thank you for your attention.

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