



Directorate-General
for Energy



- **Supporting CCS
Demonstration in Europe**

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● Background

- Fossil fuels **will** remain important part of the EU and global energy mix

BUT

- The use of fossil fuels in power generation leads to approximately **40%** of all CO2 emissions in the EU

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- Solutions needed to reduce carbon footprint: **CO2 Capture and Storage**

PROBLEM

- Technology present – but not scale



Policy goal

Up to 12 CCS demonstration
projects by 2015

CCS commercially viable
by 2020

● Obstacles to CCS / EC Action

● Legislative Hurdles

- CCS Directive

● Non-legislative Hurdles

- » Long term economic viability
 - Recovery Package
 - Emission Trading System (ETS)
- » CCS demonstration
 - EEPR and NER300 funding
- » Knowledge sharing to speed up technology development
- » Public Awareness/Acceptance
- » International co-operation
 - CCS Project Network
- » Infrastructure needs
 - Infrastructure study
 - TEN-E revision?

● CCS Directive

● Enabling Framework

- » Member States determine whether and where CCS will happen
- » Companies decide whether to use CCS on the basis of conditions in the carbon market

● Focus on Storage

- » Capture regulated under IPPC Directive
- » Transport regulated as for natural gas transport (by Environmental Impact Assessment and at Member state Level)

● EU Emission Trading System (CO₂)

● ETS Phase III

- » from 2013 full auctioning of allowances for the power sector (with some exceptions)

● CCS under the ETS:

- » CO₂ captured, transported and safely stored considered as not emitted
- » ETS allowances must be surrendered for any leakage
- » monitoring and reporting guidelines under preparation

Financing CCS Demonstration: Recovery Package (EEPR)

- €1bn for CCS demonstration
- Award Decision taken in Dec 2009 for 6 projects
 - » Jaenschwalde, Germany
 - » Rotterdam, The Netherlands
 - » Porto Tolle, Italy
 - » Compostilla, Spain
 - » Hatfield, UK
 - » Belchatow, Poland

● Financing CCS Demonstration: Allowances under the ETS

● ETS as a source of CCS support

- » 300 mil of allowances for large-scale CCS and innovative RES (NER 300)

● Timeframe & Principles

- » Call expected to be launched summer 2010
- » Funding decision by end of 2011
- » Combined EEPR/NER300 funding can not exceed 50% of additional costs for CCS

Network of CCS demo projects

EU structure to stimulate demonstration of demos
without financing them

● Added value to the first movers:

- » Coordination of demonstration projects
- » Identification of best practises
- » Knowledge sharing
- » European logo / market brand
- » Consulting services
- » Increasing public awareness
- » International cooperation

● Timeframe

- » Criteria tabled: 2.12.2009 Oslo
- » Project network start: April 2010

● Deployment of CO2 Infrastructure

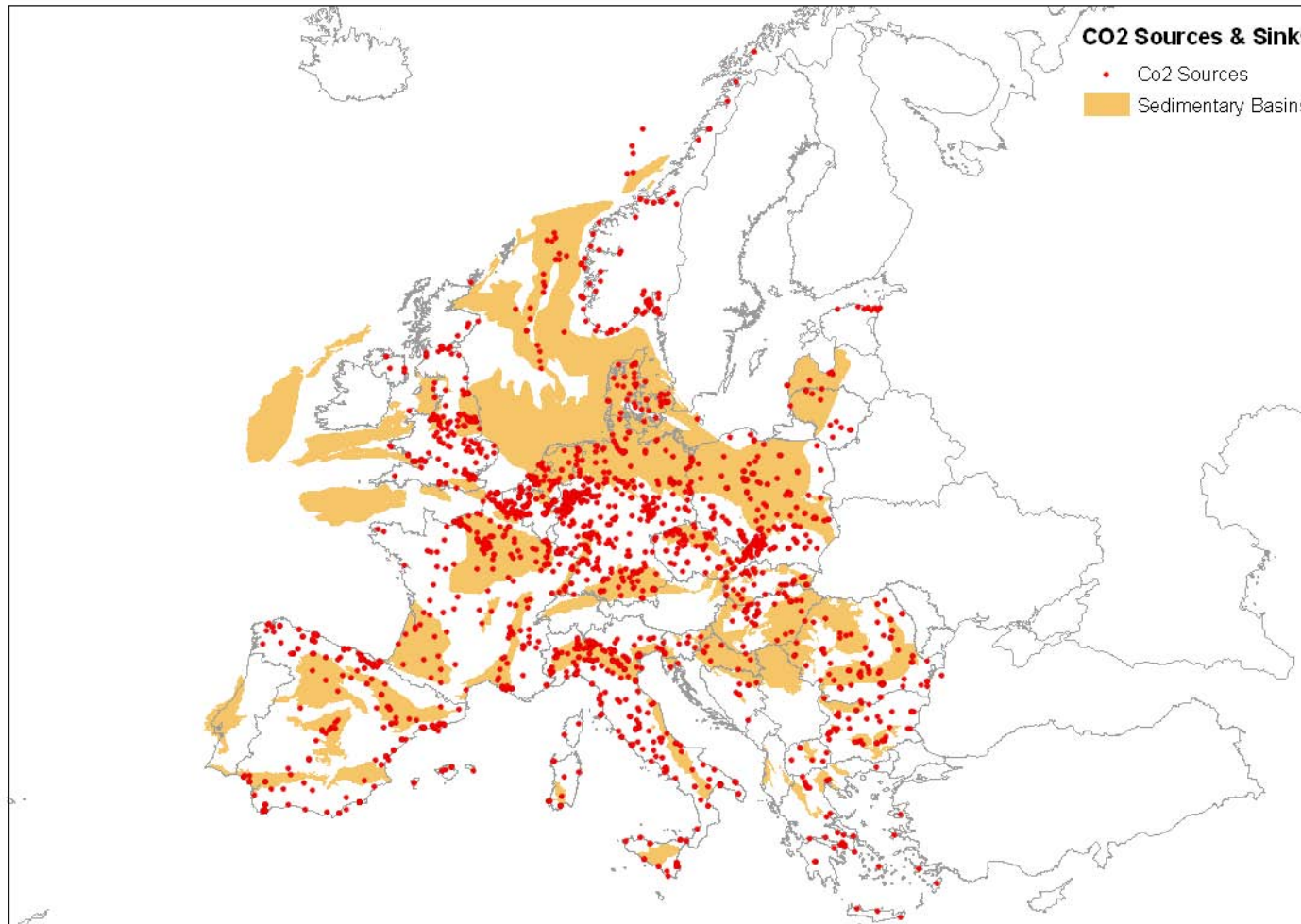
- New infrastructures needed in Europe to facilitate a successful transition towards a low carbon energy system

First (in 2010):

COMM to develop a **complete** and **integrated database** of European CO2 sinks and sources and identify the **main outline of CO2 transport infrastructure** for different scenarios

As a result – revision of **TEN-E** possible with inclusion of CO2 pipelines

Storage potential



● **Public Awareness**

- Storage site exist: but can they be used?
- How can CO2GeoNet help to build trust in the technology?

● Conclusions

- To prove CCS can be part of the solution, we need demonstration on large scale
- Proper legal framework gives legal certainty and speeds-up the deployment
- European financing sources identified but additional funds from private sector and national budgets needed
- Public awareness especially on CO₂ storage needs to be addressed
- Europe is showing its leadership but involvement of fast developing countries is crucial. Co-operation on R&D important but knowledge sharing on deployment is essential



**THANK YOU
FOR YOUR ATTENTION**

