

## EERA Joint Programme Carbon Capture and Storage

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<b>Number participants and associates:</b>	49 from 19 European Countries, 371 person years/yr involved in the Joint Programme

### Why a Joint Programme on Carbon Capture and Storage?

Carbon dioxide capture and storage (CCS) is a key element in decarbonising the power and energy intensive industry sector and thus reducing anthropogenic CO<sub>2</sub> emissions. The CCS Joint Programme (JP) is dedicated to reaching the globally agreed objectives identified as necessary enablers for large scale deployment of CCS:

- Cost competitive and energy efficient CO<sub>2</sub> capture methods and processes;
- Efficient, permanent and cost-effective storage; and
- Effective design and operation of CO<sub>2</sub> transport systems.

The CCS-JP was officially launched at the SET-Plan Conference in Brussels in November 2010.

### JP Carbon Capture and Storage –visions and objectives

The JP's vision is to be the European authority on CCS Research, development and innovation. The CCS JP provides coherence and strategic leadership to its excellent, but dispersed, energy research capabilities. The CCS JP is coordinating both national and European R&I programmes to maximise synergies, facilitate knowledge sharing and deliver economies of scale to accelerate the development of CCS.

**Current and future activities:** The CCS-JP has begun to define and execute joint projects, including a CO<sub>2</sub> transport sub-programme established in 2013. The CCS-JP has officially joined the European Industrial Initiative (EII)-CCS team and is a member of the CCS Project Network Advisory Forum. It has a close cooperation with the European CCS Research Infrastructure project ECCSEL under the auspices of ESFRI as well as the European Zero Emissions Technology Platform (ZEP). The CCS-JP contributes extensively to the SET Plan Integrated Roadmap. A Strategic Research Agenda has been developed, providing a consistent priority plan for R&I and infrastructure needs. The CCS-JP is supported via financial and in-kind contributions from the participants. Further funding opportunities are actively pursued. The EERA CCS-JP also builds collaborations outside Europe by participating in workshops and fact-finding missions facilitated by the European Commission.

Visit our webpage at: [www.eera-set.eu](http://www.eera-set.eu)

## Joint Programme on CCS Sub-programmes

### Sub-programme 1: Capture: *coordinated by Sven van der Gijp, TNO (NL)*

The CO<sub>2</sub> capture sub-programme focuses on:

- The support of demonstration projects for the power sector
- Substantially lowering capture costs by developing innovative capture techniques
- Development of capture techniques for energy-intensive industries and exploring the potential of Bio-CCS

The activities of the capture program are aligned with e.g. the European program on CCS R&D infrastructure (ECCSEL) and amongst others cover dissemination activities like workshops.

### Sub-programme 2: Storage *coordinated by Jonathan Pearce, BGS (UK)*

The CO<sub>2</sub> storage sub-programme is organised in five areas to address key research topics:

- Site characterisation
- Demonstrating permanent containment
- Safe and efficient storage
- Storage interactions with other subsurface uses
- Integration and outreach

A number of workshops are planned to review the state of the art in specific storage topics to inform the development of the CCS-JP Strategic Research Agenda.

### Sub-programme 3: Transport *coordinated by Hannah Chalmers / Julia Race, UKCCSRC (UK)*

The CO<sub>2</sub> transport sub-programme addresses:

- CO<sub>2</sub> pipeline transport and integrity
- Support of demonstration projects for a pan-European transport infrastructure
- Shipping of CO<sub>2</sub>
- Effective operation under real market conditions
- Cross-cutting issues in CO<sub>2</sub> transport systems (e.g. benchmarking and risk assessment)

The sub-programme was formally established by the Joint Programme Steering Committee in summer 2013. A series of workshops is initiated to identify opportunities for improved collaboration between EERA participants undertaking cutting edge R&I in this area.



*CCS expert meeting in Copenhagen, October 2013 to discuss future research priorities for the CCS-JP*