



CO₂ Capture Project (CCP) Phase 3 ***Preparing for Industrial Deployment***

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Project Overview

CO₂ Capture Project (CCP) – award-winning partnership of 7 major energy companies working to advance the technologies that will underpin the deployment of industrial-scale CO₂ capture and storage (CCS). Currently in third phase of activity:

- Phase 1 (CCP1, 2001-2004) technology screening/proof of concept – **completed**
- Phase 2 (CCP2, 2004-2009) intensive development – **completed**
- Phase 3 (CCP3, 2009-2013) demonstration – **on going**

The CCP is funded primarily by:

- Member and associate member contributions
- Government grants
- In-kind contributions

CCP3 project members are:

BP (Program Operator), Chevron, ConocoPhillips, Eni, Petrobras, Shell, Suncor and associate member EPRI.

In order to help make CCS a practical reality, in reducing emissions from power plants and heavy industrial processes such as oil and gas refining and gas processing, the CCP aims to accomplish the following goals:

- **Increase technical and cost knowledge** associated with CO₂ capture technologies and confirm that geological storage of CO₂ is a secure and viable means of reducing greenhouse gas emissions
- **Reduce CO₂ capture costs by 20-30%** by supporting the development of improved technologies
- **Quantify remaining assurance issues** surrounding geological storage of CO₂ through site assessments, field surveys and numerical approaches; and rapid dissemination of results to stakeholder groups
- **Validate cost-effectiveness of monitoring technologies** with design and testing of emerging and integrated systems
- **Cooperate with interested parties to share information** about both capture and storage demonstrations

- **Storage Monitoring and Verification:** increasing understanding and developing methods for safely storing and monitoring CO₂ in the subsurface
 - Storage assurance (well integrity, sub-surface processes, M&V, storage optimisation)
 - Field trialing (M&V technologies, in situ sub-surface processes experiments)
 - Stakeholder issues
- **Capture:** aiming to reduce the cost of CO₂ capture from a range of refinery, in-situ extraction of bitumen and natural gas power generation sources
 - New base-lines for CCP3
 - Technology demos (oxy-fired fluid cat cracking; oxy-fired OTSG)
 - Development projects (oxy-fired refinery heaters, CLC, membrane WGS)
- **Policy and Incentives:** providing technical and economic insights needed by stakeholders, to inform the development of legal and policy frameworks
 - Regulatory update (focus on EU, NAM, Australia)
 - Risk evaluation study
- **Communications:** taking rich content from the ongoing work of the other teams and delivering it to diverse audiences including: government, industry, NGOs and the general public
 - Technical conferences, literature, website, media
- **Economic Modelling:** building a fuller picture of the integrated costs for CCS

End