



Greenhouse Gas R&D Programme Update on Activities

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General Manager

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Greenhouse Gas R&D TCP



Part of the IEA ETN since 1991



35 Members from 18 countries plus OPEC, EU and CIAB

What We Are:



Members set strategic direction and technical programme

Independent Technical Organisation

- **We don't define policy**
- We are not advocates



Current membership



The central focus is the 'ieaghg' logo in large blue letters. To its left is a circular emblem with a globe and green arrows, surrounded by the text 'Evaluating technology options to mitigate greenhouse gas emissions'. Above and below the central logo are rows of national flags representing member countries: Australia, Canada, Denmark, EU, Finland, France, India, Japan, Korea, Norway, South Africa, South Korea, and the UK. Surrounding these are logos for major energy companies: BG GROUP, Chevron, Shell, TOTAL, ALSTOM, CIAB, EnBW, ExxonMobil, Masdar INSTITUTE, EPRI, JÜLICH FORTH-LISSZENTRUM, GESSAM Dusseldorf Network, Statoil, BR PETROBRAS, INSTITUTO DE INVESTIGACIONES ELECTRICAS, JGC, and RWE 'The energy to lead'.

Partner Organisations:

A row of logos for partner organizations: JCOAL (Japan Coal Energy Center), GeoNet, carbon (sustainable energy link), and SaskPower.

Recent reports



Title	Contractor	Report number	Publication date
Assessment of Emerging CO ₂ Capture Technologies and Their Potential to Reduce Costs	IEAGHG	2014-TR4	23/12/14
CCS Cluster Projects: Review and Future Opportunities	Cofree, UK	2015-03	09/04/15
Criteria of Fault Geomechanical Stability	Norges Geotekniske, No	2015-04	17/04/15
Review of Offshore Monitoring for CCS Projects	BGS, NOC, PML, Uni S'hampton (UK)	2015-02	July 2015
CCS Deployment in the Context of Regional Developments in Meeting Long-Term Climate Change Objectives	Carbon Counts, (UK)	2015-TR3	July 2015
Oxy-Combustion Turbine Power Plants	Foster Wheeler (Italy)	2015-05	August 2015
Integrated Carbon Capture and Storage Project at SaskPower's Boundary Dam Power Station	CKP & Associates Consulting, (Canada)	2015-06	August 2015

Technical studies



- Yearly compilation of overviews of technical reports
- Overview structure
 - Key messages
 - Background
 - Scope of work
 - Findings
 - Expert review comments
 - Conclusions
 - Recommendations



http://www.ieaghg.org/docs/General_Docs/Publications/IEAGHG%20Technical%20Overview%20Book%202014.pdf

Studies Being Reported



Title	Contractor	Due Date
Impact of CO ₂ Impurity on CO ₂ Compression and Transportation	Newcastle University (UK)	December 2015
CO ₂ -EOR Emissions Accounting	Carbon Counts (UK)	November 2015
CO ₂ -EOR Emissions Accounting - Background	Carbon Counts (UK)	August 2015
Hydrogen Production with CO ₂ Capture – Techno—economic assessment	AMEC/Foster Wheeler (Italy)	November 2015
CCS and Unburnable Carbon	SGI/Imperial (UK)	November 2015
Cost components for storage of CO ₂ in association with enhanced oil recovery	TNO (NL)	December 2015
Evaluation of Various Process Control Strategy for Normal and Flexible Operation of PCC	Imperial College (UK)	January 2016
CO ₂ Capture in Natural Gas Production by Adsorption	SINTEF (Norway)	February 2016



New: webinars

- On both individual studies and compilations of similar reports
 - Two held to date:
 - “Industry CCS Challenges”
 - “Status of biomass and CCS”
 - Recordings are available: www.ieaghg.org
- Other topics to follow:
 - IEAGHG/SaskPower Report on Bonudary Dam 3
 - SRCCS – 10 years on
 - Update on developments in offshore monitoring
 - Oxy gas turbine power plants
 - Assessing future capture cost reductions



International Energy Agency



Regular briefing on CCS status



Input to ETP/WEO
Input to WPF
Indirect Input to IEA Ministerial



Joint reports on CCS Costs & Industry CCS



Technical reports to CSLF Technical Group



ISO Technical Committee on CCS, TC-265



United Nations Framework Convention on Climate Change

Side Events on CCS Projects at COP20 and COP21

Int'l research networks



- Storage networks
 - Environmental impacts of CO₂ storage
 - Modelling
 - Monitoring
 - Risk management
- Capture networks
 - Oxyfuel combustion
 - [Summary report January 2016](#)
 - Post combustion
 - PCC3 [Summary report January 2016](#)
 - High temperature solid looping cycles
 - [Summary report March 2016](#)
- Cross Cutting
 - Social research
 - CCS Costs
 - LCA start up in November 2015



Dissemination



Information Papers

- Brief notes on technical developments & broader GHG issues
- Meet request from members for timely reporting



Web site:

www.ieaghg.org

IJGGC Special Issue No. 40



- Updates IPCC SR on CCS
- 17 technical papers on CCS progress
- Take away message:
“Considerable progress made in all areas in the last ten years”
- <http://www.sciencedirect.com/science/journal/17505836/40>
- Papers free to download until 31st Dec 2015

Integrated Carbon Capture and Storage Project at **SaskPower's Boundary Dam Power Station**

Paper GHG/15/52 refers



- First operational power sector CCS project
- **First summary report of “learnings”** from an operational CCS project
- Latest in a series of co-operative activities going back over 10 years
- Timed to publish at PCCC3/SaskPower Symposium and Before COP21
- Now reported by webinar
- www.ieaghg.org



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Thank you, any questions?

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