

# Dissemination

UKCCSC : progress meet 27 March 2006

## **From June 2005**

- Website
- A) E mail news
- B) Publications
- C) Reports
- D) Events
- F) Reporting (to NERC)

# Website

- Added news bulletins
- Added some simple introductions to CCS  
(from POST, CO2net)

- NOT added publications
- NOT added progress on themes

Only for E and F

Will others contribute?

# E mail news

- Compiled by Mark Wilkinson
- Circulated sporadically (one /month or better)
- Eclectic spread of information on “CCS” and context, not on academic disciplines
- Circulation list grown 20 ==> 60
- Archived on website (Theme F)

# Publications

Not known: send to ?Mark Wilkinson

- Submission to Stern Review on the “Economics of Climate Change”  
[www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)
- Gibbins J., Haszeldine S, Holloway S., Pearce J., Oakey J., Shackley S. and Turley C. (2006) Scope for Future CO2 Emission Reductions from Electricity Generation through the Deployment of Carbon Capture and Storage Technologies. In: Avoiding Dangerous Climate Change Ed H.J. Schellnhuber. Cambridge University Press. 379-384.
- Science and Technology Committee, House of Commons, Westminster (2006) Meeting UK Energy and Climate Needs: The Role of Carbon Capture and Storage. HC 578-I The Stationery Office, London 84pp
- Royal Society 2005 Ocean acidification due to increasing atmospheric carbon dioxide. Policy 12/05 [www.royalsoc.ac.uk](http://www.royalsoc.ac.uk)

# Reports

LOTS from the energy review

? Are there any from UKCCSC

? Do we want to write one/any  
is there any point?

# Events: past

- BGS mission to China      Jon Gibbins + Jon Pearce
- Launch of CCS Association      JG + Stuart H
- Science + Technology Ctte      Stuart H + JG+ DR + Sam H
- Italy mission to UK      JG + Sam H + FG + Stuart H

Also.....

- Sustainable Development Commission *“Developing renewables capacity to the levels required will take time, so many models project ..... the development of Carbon Capture and Storage technologies to help bridge the gap over the next 50 or so years.”*
- Australia      Power station pilot 2007
- Norway      Industrial 2.4Mt/yr EOR + CCS (Shell+Statoil) 2009

# Events: future

March 06: DEFRA Climate Change Review published

\*\*\* Feb -April: Evidence to DTI Energy review \*\*\*\*\*

\*\*\* March 06: Evidence to Treasury review of CCS economic \*\*\*\*

May 8 -11 Fifth Annual Conference on CCS, Virginia

May 8 - 11, 2006 May 21-25 31st Clearwater coal conference

End May EU ZE Technology Platform (ZEFFPP) report

June UK-China workshop (invitation)

June 19 -22 GHGT 8 Trondheim

July 4-6 UKERC Assembly, Edinburgh {CCS Sustainability?}

July Royal Society of Edinburgh report ?

? July: DTI Energy review report

September 06 Stern Review reports

2007 Projects and bids to FP 7

# Reporting (to NERC)

1. **External co-funding or support in kind**
2. **Publications:** journals, book chapters, maps, other non-refereed
3. Prizes
4. New patents
5. Income from licensing and sales
6. **Main achievements** research highlights, science stories and knowledge transfer. Impact on: UK Collaboration, International Collaboration, Exploitation, General interest to public, Industry, Policymakers & regulators
7. **Public engagement:** activities to communicate to non-scientific audiences and/or to engage with the public on science-related  
Don't include knowledge transfer activities or activities aimed at scientific audiences. You can include amateur scientific groups or mixed target audiences, but not undergraduate audiences.
8. **Relevance to current environmental policy** development, and the provision of advice to government. Identify the Government Departments/Agencies and/or European/international policy-making organisations

# DEFRA Climate Change review 28 March 06

Sunday

? UK will keep CO2 targets as they are

? UK try to reduce by 3 -8 Mt C/yr 11-28MtCO2/yr  
(cf. existing 500Mt CO2/yr 150MtCO2 electricity)  
ie up to 5% UK total, OR 18% UK electricity

Tuesday:

The Climate Change Programme review projects that new and existing policies will deliver a cut of 15-18% by the end of the decade.

Among the measures announced in the review are:

- \* a stricter emissions cap for industry
- \* encourage the uptake of biofuels in petrol
- \* measures to improve household energy efficiency
- \* tighter building regulations

## **In the energy supply sector we will:**

consult now on a National Allocation Plan for the second phase of the EU Emissions Trading Scheme to achieve carbon savings of between 3 and 8 MtC;

spend £80m in the next three years to support microgeneration technologies, with the aim of encouraging manufacture at higher scale leading to lower costs;

provide £35m over four years for the development of carbon abatement technologies, and consult on the barriers to wide-scale commercial development of carbon capture and storage (CCS) in the UK and the potential role of economic incentives in addressing those barriers;

continue to support electricity from renewables under the Renewables Obligation and address barriers to take-up; and

fully consider the treatment of CHP in the UK's National Allocation Plan for the second phase of the EU Emissions Trading Scheme.

90. In the 2005 Pre-Budget report<sup>9</sup>, the Government announced support for alternative sources of energy and committed to consult on carbon capture and storage (CCS) and work with Norway to develop its understanding of this technology further. In addition, Budget 2005<sup>10</sup> announced a new UK Energy Research Partnership (UKERP) bringing together private and public sectors to develop a common vision for energy research and innovation. The Government will work closely with the UKERP and will consider further the scope for supporting innovation and technological development as part of the Comprehensive Spending Review 2007.

# DEFRA 3

## Annex G

Current evidence suggests that the cost of capture and storage of carbon dioxide from new power plants is around \$40-60 per tonne of carbon dioxide, which can be expected to fall as the technology matures. This is comparable with other major abatement options, and suggests that the technology could have a major role in mitigating emissions. The rate of deployment is constrained by uncertainties over economics (cost of capture technologies, and emissions trading eligibility) and legal status of subsea-bed storage under the London and OSPAR Conventions,

# Treasury march 06: 1

1.48 Views are therefore welcomed on the following questions about the costs associated with CCS:

1) What are the costs currently associated with the development of different potential CCS technologies and forms of deployment?

2) How might these costs change over time and what is the evidence for any estimates of this?

3) How might changes in the relative prices of coal and gas in the framework governing emissions of CO<sub>2</sub> and other pollutants affect the costs and profitability of CCS?

4) To what extent does EOR reduce costs and increase the commercial viability of CCS?

# Treasury march 06: 2

5) How does EOR using CO<sub>2</sub> compare in cost terms to EOR using other means?

6) Is the use of CO<sub>2</sub> for EOR appropriate on the UK continental shelf and at what stage in the life of a specific field is it appropriate to use EOR?

7) What are the costs associated with building capture-ready plant and how do they differ from the cost of constructing fully operational CCS facilities? To what extent can any additional costs be mitigated by decisions on design, location etc?

8) Is the use of CCS currently a profitable option for businesses in the electricity supply sector and other sectors and, if not, what is the shortfall? Under what conditions might it become profitable?

# Treasury march 06: 2

1.54 Views are welcomed on the following:

What is the impact of the current policy framework on the development of CCS?

and

Are there any particular issues that need to be taken into account with regard to CCS when considering the use of policy mechanisms to reduce CO emissions in the UK economy?

# CCS sustainability July

- Bellona - Norwegian CCS economics
- Shell (Draugen project)
- Malcolm Wilson (Weyburn)
- David Howard (CEH) biofuels in UK
- DEFRA (Amal Lee) - vision in UK policy
- George Monbiot (Guardian) / Tony Juniper FoE/ Green Alliance (Russell Marsh) / Geoffrey Lean (Independent)
- Politician (SNP Richard Lochhead / Alastair Carmichael +..)
- Climate scientist (Myles Allen, Oxford / Tim Lenton UEA)
- Carol Turley (shelf seas + oceans)
- Tree / charcoal sequestration (UoE / QUEST / .....
- Discussion space





