

Weekly News Update

Saturday 5th May 2012 - Friday 11th May 2012



Member Updates

Norway

What new CCS activities have been undertaken this month?

CO₂ Technology Centre Mongstad (TCM) opening 7 May

On 7 May, Prime Minister Jens Stoltenberg will conduct the official opening of CO₂ Technology Centre Mongstad. More than 250 invited guests from around the world will participate in this event. EU's Commissioner of Energy Günther Oettinger will also participate in the inauguration event starting at 2 pm at Mongstad. The inauguration ceremony will be followed by a panel discussion hosted by the Norwegian Minister of Petroleum and Energy Ola Borten Moe, and co-paneled by Statoils CEO Helge Lund, Head of IEA Maria van der Hoeven and Global CCS Institute's CEO Brad Page.

Afterwards there will be guided tours of the TCM facilities. An inauguration dinner is to be held at the Håkonshallen in Bergen at night.

Among all the prominent guests, there will be more than 100 from Global CCS Institute, and IEA GHG (IEA Greenhouse Gas R&D programme), representing major parts of the global CCS community.

Several events will take place in Bergen in connection with opening TCM.

On 8th May, Gassnova, together with the IEA Greenhouse Gas R&D programme and the Global CCS Institute, will organise a technical seminar where about 220 people will participate from Norway and abroad. The title of the seminar is: The Status of Carbon Capture Technologies. Claude Mandil, Chairman of the IAP for the Global CCS Institute will be the moderator for this event.

Global CCS Institute member meeting in Bergen on 8th May

In connection with the opening of TCM, the Global CCS Institute will hold its European member meeting with approx. 70 participants.

IEAGHG 41st ExCo meeting held in Bergen

Gassnova and the CLIMIT-programme (is a collaboration between Gassnova and the Research Council of Norway) are hosting the event. There are about 40 member countries and it is estimated that approx. 60 representatives will be present in Bergen during 9th-10th May.

Any other comments/activities regarding CCS

New test opportunities at TCM

In alignment with CO₂ Technology Centre Mongstad overall objective of enhancing CO₂ capture technologies globally; we are now inviting vendors or parties internationally to compete for a role in new and exciting test opportunities at Mongstad.

- TCM is right now in the start-up phase, but we are already thinking about taking the next step, says Managing Director Tore Amundsen.
- Our amine CO₂ capture plant is the largest, most comprehensive and flexible test facility in the world. We are now inviting additional companies to use it, bringing the global carbon capture technology development forward. In addition we are inviting owners of emerging technologies to demonstrate them at our available area tied in with our unique and robust infrastructure at Mongstad, Amundsen says.

These are the two requests for interest now available:

- TCM invites interested parties/vendors to participate in a negotiated tender process towards further use of the large scale amine test and demonstration plant after the current test program, expected to be completed by end 2013.
 - TCM also invites interested parties/vendors to participate in a negotiated



tender process for using the available area, utilities and other infrastructure of TCM towards construction and testing of further carbon capture technology.

For more information: www.tcmda.com

RWE Power AG

What new CCS research has been carried out this month?

Long-term trial at the post-combustion capture pilot plant and CO₂ usage projects are ongoing as planned.

What reports on CCS have been published this month?

Thomas Thielemann, Hans-Wilhelm Schiffer, "Why there will be no peak coal in the foreseeable future"; Open Journal of Geology, 2012, 2, 57-64

Below are the links to the Cost Reduction Task Force page on the DECC website together with the link to the Mott MacDonald report on cost reduction that DECC requested they write.

- Link to the cost reduction task force page on the DECC website:
<http://www.decc.gov.uk/en/content/cms/emissions/ccs/facilitating/costreduction/costreduction.aspx>

- Link to the Mott MacDonald report:
"Potential cost reductions in CCS in the power sector: Discussion Paper"
<http://www.decc.gov.uk/assets/decc/11/ccs/5237-potential-cost-reductions-in-ccs-in-the-power-sect.pdf>

The Queen's Speech (no link)

The key measure in the Queen's Speech made today affecting our industry is the Energy Bill, but also of note, the Enterprise and Regulatory Reform Bill will provide for the establishment of the Green Investment Bank.

The Energy Bill will be published as a draft Bill for pre-legislative scrutiny on Tuesday 22nd May. The legislation is intended to reach the statute book by 2013 "so that the first low-carbon projects can be supported under its provisions in 2014". The key provisions of the Energy Bill, are set out below:

- **Energy Bill**

Introducing a system a feed-in tariff with Contracts for Difference (FiT-CfD) to "make investment in clean energy more attractive." Introducing an Emissions Performance Standard (EPS) to prevent construction of new coal plants which emit more than 450g/kWh i..

- **Creating an independent, industry financed statutory regulator, the Office for Nuclear Regulation.**
- **Enabling the sale of a Ministry of Defence asset, the Government Pipeline and Storage System (GPSS).**

Introducing a Strategy and Policy Statement which would set out the Government's strategic priorities for the energy sector in Great Britain, describe the roles and responsibilities of bodies who implement or are affected by GB energy policy and describe policy outcomes which are to be achieved by the regulator and the Secretary of State when regulating the sector.

Masdar completes CO₂ capture project (no link)

Masdar Institute of Science and Technology and Siemens jointly announced the successful completion of their first carbon capture and storage (CCS) research collaboration project on Tuesday. The project focuses on CO₂ capture at gas-fired power stations and utilisation of CO₂ for enhanced oil recovery (EOR).

The meeting of an advisory committee of representatives from Masdar Institute and Siemens also announced that a second project is progressing satisfactorily. In addition, the committee finalised ideas for potential research projects on Masters and PhD levels.



The first project on "Evaluation of CO₂ Purification Requirements and Techno-Economic Evaluation of Processes for Impurities Deep Removal from the CO₂ Product Stream" began in May 2011 and the final presentation was provided recently. Dr Mohammad Abu Zahra, assistant professor, Chemical Engineering, Masdar Institute, was the project leader with Dr Toufic Mezher, professor, Engineering Systems and Management, as the co-project leader.

CCSA Communications Working Group

The CCSA Communications working group met last Thursday 3rd May with key discussions including:

The 12-point key messages document was agreed & finalised, with an action to convert this into a branded hand-out for members at the Members meeting in June.

1-page CCSA papers on key topics will be developed with 12-point key messages on the back.

The current messaging framework will be updated to reflect the current CCS climate

It was decided to develop infographics (CCS facts & figures presented visually) which could be used in a number of contexts All comms materials are saved on <http://www.ccsassociation.org/members-area/ccsa-comms-collateral/>

America has room to store 500 years of emissions

Atlas of underground storage potential highlights huge carbon capture opportunity under Obama's "all of the above" energy policy.

Carbon emissions from power plants and factories in North America could be stored underground for at least 500 years, according to the first ever document mapping the underground storage potential of the continent.

Published last week, the North American Carbon Storage Atlas (NACSA) is a joint effort between the US, Canadian and Mexican governments and includes both low and high estimates for storage capacity.

World-class Coal Facility Advances with IDEM Proposed Permit

Indiana Gasification today welcomes the decision by the Indiana Department of Environmental Management (IDEM) to file a proposed permit for our company's state-of-the-art plant with the U.S. Environmental Protection Agency (EPA).

"For Indiana, its energy future is now. The IDEM proposed permit demonstrates that our gasification facility will be the cleanest coal plant ever permitted in the United States and among the cleanest in the world," said Bill Rosenberg, a partner in Indiana Gasification and former Assistant Administrator for Air for EPA. "Our facility will create more than 3,000 jobs (including about 1,000 plant construction jobs, 2,000 jobs to construct an interstate CO₂ pipeline, and 500 on-going jobs from plant operation and mining), enhance the nation's energy security, and reduce this nation's carbon footprint. Equally important, this facility demonstrates that clean coal remains an integral part of the 'all-of-the-above' approach to domestic energy production endorsed earlier this year by President Obama and numerous energy experts," Rosenberg added.

Norway opens major facility to test carbon capture

Norway on Monday launched the world's largest facility of its kind to develop carbon capture and storage (CCS), the so-far commercially unproven technology that would allow greenhouse gases from power plants to be buried safely underground.

A 5.8 million Norwegian kroner (\$1-billion U.S.) government-funded centre will test two post-combustion carbon capture technologies that could be extended to industrial-scale use if shown to be cost-effective and safe.

"Today we are opening the world's largest and most advanced laboratory to test carbon capture technologies ... It is an important project for Norway and for the world," Prime Minister Jens Stoltenberg told the opening ceremony at the Technology Centre Mongstad (TCM), northwest of Bergen.



SA endorses carbon capture roadmap

Cabinet has officially endorsed a 'Carbon Capture and Storage Roadmap' as one of the instruments for lowering the carbon dioxide (CO₂) emissions of South Africa's coal-intensive energy system.

Government voluntarily committed to reducing CO₂ emissions by 34% against a business-as-usual trajectory by 2020 and by 42% by 2025, on condition of receipt of international technology and financial support.

Under South Africa's National Climate Change Response Policy, which was endorsed by Cabinet last year, emissions were expected to peak in 2025 and begin reducing from 2036 onwards.

Large emitters had also been given until October 2013 to finalise carbon budgets, which would be used as a tool by policymakers for setting targets and for determining action plans.

Crunch time for green technology as sea-test starts

Scientists from across the UK and from as far afield as Japan will arrive in Scotland this week to prepare for ground-breaking research on carbon capture and storage.

It will try to find if the system – known as CCS – can be an environmentally safe way of cutting greenhouse gas emissions.

A world-first experiment will take place at Ardmucknish Bay, just north of Oban, to see what happens if carbon dioxide (CO₂) leaks from pipes or storage areas into the seabed and seawater above.

Between 80 and 800 kilos of CO₂ will be pumped into the sediment of the bay for each of the experiment's 30 days.

The research site is close to the Scottish Association for Marine Science (Sams) Dunstaffnage Marine Laboratory, part of the University of the Highlands and Islands.

Sams is co-ordinating the research effort along with eight partners.

It is being funded by the Natural Environment Research Council of the UK, the Department of Energy and Climate Change and the Scottish Government. The tests could be highly significant as the CCS technology is seen by many as being a vitally important element in the fight against climate change.

Future Conventional Power Consortium

Proposals are invited for multi-disciplinary research consortia in conventional power with the aim of reducing carbon emissions and increasing the flexibility, efficiency and sustainability of electricity generation from fossil fuels. Funding of £2M is available to support one major consortium for up to five years. Industrial support (both cash and in-kind) to match the funds requested from EPSRC is required for any proposal submitted to this call. Closes 16 August for full proposals.

Scoping Workshop: Engineering and Physical Sciences Research Challenges in Geological Storage for CCS <http://www.epsrc.ac.uk/funding/calls/open/Pages/geologicalstorageforccs.aspx>

EPSRC invites expressions of interest from eligible individuals to attend a workshop in the research challenges around geological storage for carbon capture and storage. The workshop will be held at the Crowne Plaza Birmingham NEC Hotel on 10th July 2012. The workshop will be a one day event that will bring together the various academic, industrial and other stakeholder carbon capture and storage communities to scope a call in how engineering and physical sciences research can tackle challenges around geological storage and contribute to accelerating the deployment of CCS. The outputs from this workshop will form the basis of an open call for up to £5m to be funded by EPSRC, as part of the RCUK Energy Programme. Closes 7th June 2012 for expressions of interest.



ieaghg

\$271m for carbon storage areas

Carbon storage areas will be established around the country with the help of \$271 million in grants for land care groups.

Announced by the federal Government, 317 successful projects will revegetate, rehabilitate and restore more than 18 million hectares of the Australian landscape through the Biodiversity Fund.

Environment Minister Tony Burke says the projects have real potential to advance the reversal of biodiversity decline and establish significant areas of carbon storage.

Almost half the projects announced today would be running over a six-year period. "Providing long-term support to land managers leads to enduring results for our environment and for the community," says Mr Burke.

"Across Australia, farmers and other land managers already do a great job through Landcare work and the Biodiversity Fund will build on this work.

"A number of projects announced in this first round also align with the intent of the draft National Wildlife Corridors plan helping to improve connectivity in the landscape through the establishment of landscape scale wildlife corridors."

New South Wales receives \$98.6 million, with the biggest grant of \$3.9 million awarded to the Northern Rivers Catchment Management Authority for three separate projects.

Attachment:

Please see the email message attached to the main email regarding UKTI Global Energy Summit that will take place at Lancaster House in London on Monday 6th and Tuesday 7th August with Day 1 focused on energy use and Day 2 on supply.