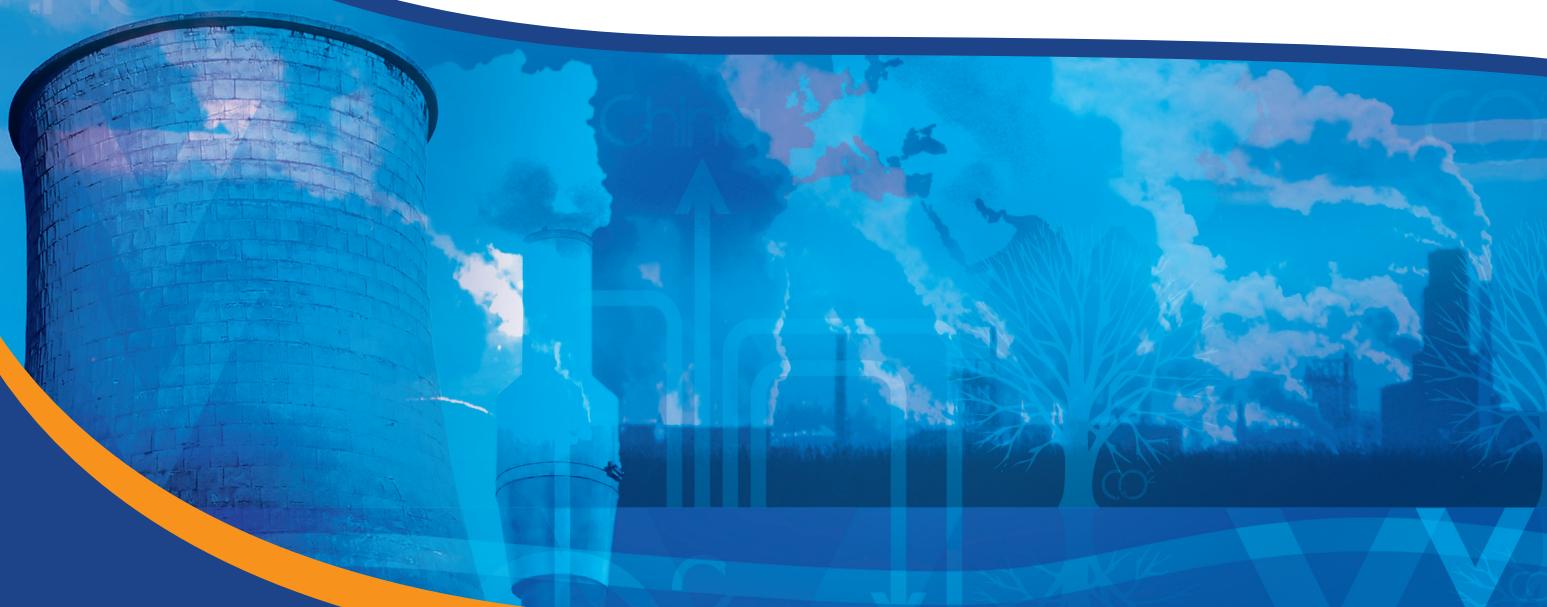


# The 2nd Annual Brussels Carbon Capture & Storage Summit 2011

Reaching demonstration and beyond  
- will the technology be ready for 2020?



## Conference Report

Held on 26th January 2011

Sofitel Europe . Brussels

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## The 2nd Annual Brussels Carbon Capture & Storage Summit 2011

Reaching demonstration and beyond - will the technology be ready for 2020?

The 2nd Annual Brussels Carbon Capture & Storage Summit, organised by Forum Europe and Bellona Europa and sponsored by the Government of Alberta, brought together a broad and experienced group of stakeholders to identify and explore in detail what can be done to clarify the demonstration progress of CCS, focusing particularly on the issue of finance and regulation, posing the question: Will the technology be ready in Europe by 2020?



the successful demonstration of 6 CCS projects by 2015, knowledge sharing and the issue of public perception.

Dr. Graeme Sweeney provided the Zero Emissions Platform perspective on the importance of applying CCS

not just for power generation, but also for heavy industry. After a brief overview of the project funding processes carried out on all large-scale demonstration projects, he underlined that CCS was expected to provide almost 20% of the necessary global CO<sub>2</sub> emissions reductions by 2050, and that these reductions would cost 70% more without CCS. In his conclusion, Dr. Sweeney focused on a number of key actions required on a range of issues, including CCS within the CDM in order to accelerate construction of demonstration projects in developing countries, and the maximisation of international cooperation on knowledge sharing.

### Opening keynotes



After a short welcome from Bellona Europa Director **Paal Frisvold**, **Philip Lowe**, Director General of DG Energy at the European Commission and **Graeme Sweney**, Chairman of the Zero Emissions Platform

and Executive Vice-President, CO<sub>2</sub>, Shell began the conference providing the keynote presentations.

**Philip Lowe** focused his remarks on the need for immediate joint efforts of European Commission, Member States and industry to realise CCS demonstration, emphasising that the development of CCS for the deployment phase after 2020 has to start now. In addition, Lowe commented that the main challenges currently facing Europe with regards CCS include the transposition of the CCS directive into national legislation,



### Session 1 Financing CCS - NER300 and the ETS



With the conference taking place with under two weeks to go before the deadline for submission of Project applications to Member States in the first call for proposals, **Martina Doppelhammer**, from DG

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Climate Action at the European Commission, outlined timing and selection criteria under NER 300, including that the projects will be ranked according to their cost per unit performance. The Commission aims to make the award decisions on the first tranche of the NER300 in the second half of 2012.



**Giles Dickson**, Vice President Government Relations Europe, Alstom Power made note of the principle of the cost per unit performance as a criteria in project funding selection with **Christopher Knowles**, Head of Climate Change and Environment at the European Investment Bank, adding that there was a need to find additional funding sources where gaps occur. They also highlighted the importance of future CCS investments in gas plants given that the prominence of gas in the fuel mix continues to grow. There were general calls for gas power plants to be included in the NER300. Dickson was frank in his assessment that the NER300 was too little and too slow and that large-scale private investments in CCS technology will not occur, "unless there is a substantial increase in public financial support for CCS."

**Angela Whelan** from the Ecofin Research Foundation explained that private sector capital providers are willing to consider investing in CCS provided that some issues are addressed. Sponsors of CCS must be major players

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in their sector, be they utilities, fuel suppliers or equipment manufacturers. Holder of bonds or equity in the major

corporates would not object to corporates devoting a proportion of their capital budgets to CCS demonstration projects, but only to a limited extent. Debt providers would require a performance guarantee for the entire plant: this needs to embrace not just the capture equipment but also the power station (a wrap). Also a credible route to achieving grid parity from generating from CCS needs to be established.

### Session 2

#### EU & Member State policy tools - Striking the right balance



**Chris Davies** MEP and rapporteur on the EU directive on geological storage of CO<sub>2</sub>, argued that the development of CCS is of course taking place through the various demos,

but that at the political level, "the EU came up with this great goal to have 12 demonstration projects up and running by 2015 but most people now realise that this is unlikely to happen. Currently, the political will for CCS simply does not exist".

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**Adam Dawson**, Chief Executive and Director of the Office of Carbon Capture and Storage at the Department for Energy and Climate Change in the UK, made the point that last year was the warmest ever yet but because of the

amount of rain and snow, public perception could be that global warming is not in fact as serious as claimed. Dawson illustrated the current planned projects in UK, where a new capital budget of one billion pounds has been established to support the UK's first CCS project, even in the financial crisis, underlying the UK commitment to the early deployment of CCS.

**Mark Johnston**, Senior Policy Advisor in the European Policy team of WWF International emphasised that national subsidies already provided to large emitters



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meant that the private sector should really be bridging the finance gap (polluter pays principle). **Maarten de Hoog** from the Rotterdam Climate Initiative raised the possibility of making CCS mandatory, delivered through operating permits. This view was welcomed by many but is seen as something unlikely at least in the near future.

### Session 3 Global CCS Development - The current State of Play

This session focused on the development of CCS more broadly and provided case studies from both international and regional levels, looking at best practice in terms of cooperation and knowledge sharing. First **David Hawkins**, Director at the Natural Resource Defense Council in the US, indicated that the program budget in the USA for carbon sequestration has been increasing during recent years resulting in CO<sub>2</sub> performance standards and deployment programs, where there are currently 20 scheduled projects.



Many stakeholders once again emphasised the necessity for the development of CCS technology for industrial sources of CO<sub>2</sub>, including Derek Taylor, Regional Representative for the Global CCS Institute in Europe who observed that this area "...has not been sufficiently addressed." In the last speech of this session

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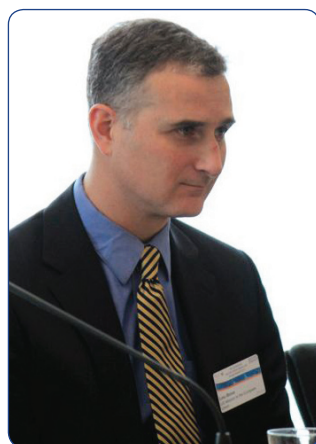
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**Doug Lammie**, Director of CCS projects at the Government of Alberta, starkly demonstrated the regions CO<sub>2</sub> reduction commitments through an existing \$2 billion CCS funding program. A cumulative example of their work has been the public-private partnership with TransAlta (Canada's largest publicly-traded generator of electricity and renewable power) to create "Project Pioneer". This project will result in the building of one of the world's first fully integrated carbon capture and storage facilities for a coal-fired power plant.

The panel discussion, which included **Louis Bono**, Counsellor for Energy and Environment at the US Mission to the EU, **Stephen Brown**, Director of CCS at CO<sub>2</sub> Sense Yorkshire, **Chen Jingquan**, Second Secretary at the Mission of the People's Republic of China to the European Union and also **Juho Lipponen**, Head of the CCS Unit at the International Energy Agency, all agreed that the issue of public acceptance of CCS is very critical and requires very active approach by industry and government. Onshore storage, as in the Project Pioneer example it was argued



is certainly something that can be achieved without strong opposition as long as there is an coordinated approach. Finally, **Paal Frisvold** closed the day with a message regarding CCS development in the EU: "...We are the first out of the gate; we can do 20% of CCS and cut the global cost of climate change mitigation by 40% so, now, we need to think post-demonstration and put instruments in place." He concluded, "this is going to be a very tough journey but we are not going to give up!"



The report was written by **Jonathan Albo Sanchez**, University of Cantabria and published by **Forum Europe**.

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