World Coal Association contribution to DG Energy public consultation on the future of CCS in Europe

The World Coal Association is the global industry association bringing together the world's largest coal producing companies and companies providing services to the coal mining industry. WCA Members support effective CCS deployment and have been actively calling for the establishment of the NER300 programme and the inclusion of CCS under the Clean Development Mechanism within the UNFCCC processes.

Delay in CCS demonstration and deployment

CCS demonstration and deployment is experiencing significant delays worldwide as are many other low-carbon energy technologies. In fact, all climate solutions are well behind schedule. The IEA calculated in 2008 that 35 CCS coal plants, 20 CCS gas plants, 32 nuclear plants, 17,000 wind turbines and 215m^2 of solar panels need to be built every year to keep global warming below 2 degrees this century. None of these targets are reached. Delay in CCS demonstration needs to be seen in this context.

However, it has to be acknowledged that public spending for CCS demonstration is incomparably lower than that for other low-carbon technologies. CCS is expected to deliver 14% of economy-wide GHG savings through to 2050. In comparison to this nuclear power is expected to deliver 8%, and renewable energy technologies 21%. These proportions are not reflected in public spending for low-carbon technologies. Last year renewable energy technologies received $64 billion in public funding, nuclear power received $45 billion and CCS received only $13.5 billion over the last seven years.

Current context

The on-going European Commission (EC) consultation on the future of CCS in Europe and the forthcoming EP report on the same subject need to be put in the wider policy context and with several constraints in mind. First of all Europe's economy is still affected by the economic crisis and pre-crisis growth has not yet been fully recovered, therefore new policies supporting CCS deployment should bear a minimum cost for the taxpayer. Secondly, negative impacts of rising energy costs on households and businesses can already be observed in a number of EU Member States making it vital for new policies and regulations not to result in higher energy costs for end users.

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WCA recommendations

The business case for CCS needs to be strengthened by facilitating the emergence of a market for CO2 and support for EOR

Out of the total of 16 large-scale integrated CCS projects in operation or execution stage today around the world 10 utilise the CO2 captured in enhanced oil recovery. These figures prove the relevance of carbon utilisation in the business case for CCS today.
The IEA estimates show that Europe could store around 4.7 Gigatonnes of CO2 through enhanced oil recovery (EOR), with the North Sea Basin being one of the most attractive sites for EOR in the world.[1]

The EU should encourage CCS demonstration projects which include EOR as a storage facility and support R&D efforts in other areas of CO2 utilisation. In the USA the Department of Energy finances six projects CO2 utilisation projects in the production of cement and polycarbonates, in carbonate mineralisation and in enhanced hydrocarbon recovery. The EU should work with its partners in the USA to support R&D efforts which can improve the business case for CCS via CO2 utilisation.

Efficiency improvements at coal-fired power plants are an essential milestone in the deployment of CCS technology

High-efficiency low-emissions coal combustion technologies present a significant mitigation opportunity before CCS is commercialised. High efficiency coal plants also significantly improve the economics of CCS by reducing the amount of CO2 that needs to be captured per unit of energy produced. That is why in its CCS Roadmap the IEA identified efficiency improvements at coal-fired power plants as one of the key technology milestones for an effective deployment of CCS.

In fact, one percentage point improvement in the efficiency of a conventional pulverised coal combustion plant results in a 2-3% reduction in CO_2 emissions and highly efficient modern coal plants emit almost 40% less CO_2 than the average coal plant currently installed.

An estimated 59 Gtonnes of reduced CO2 emissions from coal power could have been achieved, had new coal units over the past 50 years used the highest efficiency technology available when built. This is a significant amount of CO2, equivalent to the world not producing any CO2 over the next two years, and illustrates the importance of efficiency gains in reducing CO2 emissions.

In the OECD, the IEA analysis shows that potential CO2 savings from improving average efficiency of coal power plants could be as high as 800 Mt of CO2. This is equal to annual CO2 emissions of the EU's largest CO2 emitter – Germany.

The introduction of an Emissions Performance Standard is not likely to incentivise CCS deployment

[1] GCCSI website, **http://www.globalccsinstitute.com/publications/global-technology-roadmap-ccs-industry-sectoral-assessment-co2-enhanced-oil-recovery-14**

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The EC consultation on CCS contemplates the idea of introducing an Emissions Performance Standard as an incentive for CCS projects. This approach has also been suggested last year in Canada, the UK and the USA where the proposed EPS is based on emission values per kWh well below typical emissions from state-of-the-art coal-fired power plants, but above those from natural-gas fired plants. An EPS which favours unabated gas over unabated coal is not likely to incentivise the deployment of CCS technology and will only result in a dash for natural gas.

Fossil fuel suppliers already finance CCS demonstration on a voluntary basis

The EC consultation also contemplates including fossil fuel suppliers in the financing strategy for CCS. Many among WCA Member companies already finance CCS projects, including in Australia, China and the USA. We believe that any such approach should be based on a voluntary basis. The COAL21 programme introduced in Australia provides an excellent example of voluntary contribution of the coal industry towards financing of CCS. The programme which will raise AU$1 billion over 10 years, between 2006 and 2016 from a voluntary levy on coal production to support the pre-commercial demonstration of low emissions coal technologies, including carbon capture and storage.

To facilitate the emergence of public support for CCS, EU Institutions should present a more balanced view on the role of fossil fuels, including coal, in the EU's energy supply

Given that the Treaty on the Functioning of the European Union gives each Member State a right to determine its choice between different energy sources and the general structure of its energy supply, European institutions should not support reports which present an unbalanced analysis of the role of coal in the EU's energy market or which advocate phasing out of coal.

It is also unacceptable that the language used in some of the European Commission publications in relation to fossil fuels is more dogmatic than scientific. This is regrettable because biased terminology on the part of public institutions is not contributing towards creating an environment where the need for CCS technology is understood by the general public.

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1 July 2013

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