

**NEWS RELEASE**

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**CCS DEMONSTRATOR WILL PUT UK AHEAD IN GLOBAL RACE FOR CLEAN COAL**

The design spec for the UK's first Carbon Capture and Storage (CCS) plant was significantly refined today as John Hutton announced that the Government will support a single post-combustion coal-fired project.

Setting out the key criteria ahead of the planned formal launch of the Government's CCS competition in November, the Business and Enterprise Secretary said:

**“Finding cost-effective ways of using fossil fuels more cleanly is vital in meeting the twin challenges of climate change and energy security.**

**“Coal is abundant in the world but it is dirty. I am today committing the UK Government to backing the construction within 7 years of one of the world's first commercial-scale coal-fired CCS projects.**

**“Our analysis shows that post-combustion capture is the most relevant technology to the vast proportion of coal-fired generation capacity globally. A commercial-scale demonstration of this technology, as part of a full CCS chain, opens up huge possibilities, not just for Britain but also for the world.**

**“It has the potential to remove and safely store up to 90% of damaging CO2 emissions. The capture technology can also be retro-fitted to**

**existing coal-fired plants. This will be vital in tackling climate change on a global scale – China alone built an average of one new coal-fired power station every four days in 2006.**

**“By 2030, wider deployment could see up to a third of Britain’s electricity generated in this way and UK exporters of CCS technology and expertise cornering business worth many billions in a global market.”**

Carbon Capture and Storage has the potential to enable the generation of low carbon electricity from fossil fuels. The carbon in fossil fuels is captured as CO<sub>2</sub> and committed to long-term storage in geological formations such as depleted oil and gas fields.

In the Budget in March, the then Chancellor Gordon Brown announced that the Government would launch a competition to support the building of a Carbon Capture and Storage demonstration in the UK. The current Chancellor, Alistair Darling, confirmed this commitment today in the Pre Budget Report.

The project should demonstrate post-combustion CCS on a coal-fired power station, with CO<sub>2</sub> stored offshore. The Government will consider a phased approach to the project as long as the full CCS chain is demonstrated by 2014, and the project captures around 90% of the CO<sub>2</sub> emitted by the equivalent of 300MW generating capacity as soon as possible thereafter.

This competition will ensure the UK is a world leader in bringing forward this globally important technology for tackling climate change, relevant to the UK, to the EU’s aspiration to have 10-12 demonstration projects by 2015, and vital for the transition to a low-carbon economy in China and India.

The competition remains on track to be launched in November. John Hutton is today launching a short period of discussion with industry, prior to the planned

formal launch, starting with an Industry Day for prospective participants in the demonstration.

### **Notes for editors**

1. CCS is a type of Carbon Abatement Technology (CAT) in which the carbon in fossil fuels is captured (as CO<sub>2</sub>) either before or after combustion and committed to long-term storage in geological formations.
2. The technologies involved in CCS are not novel but have not yet been demonstrated together at scale on power plant. The two main CO<sub>2</sub> capture methods are:
  - Post-combustion capture - CO<sub>2</sub> is separated from flue gas. The preferred technique is to scrub the flue gas with a chemical solvent (usually an amine) – this is an established industrial process.
  - Pre-combustion capture (IGCC - Integrated Gasification Combined Cycle) Involves reacting fuel with oxygen, air, or (less usually) steam, to produce a gas consisting mainly of carbon monoxide and hydrogen. The carbon monoxide is reacted with steam to produce hydrogen and CO<sub>2</sub>, which is separated. If used with oil or coal additional equipment is needed to remove impurities such as sulphur compounds.
3. Norway and the US are the only other countries that have committed to supporting a commercial-scale carbon capture and storage plant, but using different technologies. The Norwegian project uses post-combustion capture technology on a natural gas power station, the US project will use pre-combustion capture technology on a coal power station. Both of these projects are scheduled to be operational around the same time as the UK project.
4. Following the commitment in Budget 2007 to launch a competition to develop a commercial-scale demonstration of CCS, the Energy White Paper 2007

([www.berr.gov.uk/energy/whitepaper/page39534.html](http://www.berr.gov.uk/energy/whitepaper/page39534.html)) provided further details. It confirmed that projects must be commercial-scale, capture and store around 90% of the carbon dioxide and contribute to the achievement of our aim to encourage the wider deployment of CCS in the UK, Europe and internationally, and must start demonstrating the full chain of CCS by 2014.

5. The Stern Review ([www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)) highlighted the strategic role that CCS technology could play globally to lower carbon emissions, with the potential to contribute up to 28% of global carbon dioxide mitigation by 2050, particularly in fast-

growing economies with fossil fuel consumption such as China and India.

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