

MEETING OF THE COMMITTEE

ON TUESDAY, 14TH JULY 2009 AT 5.30 PM

IN THE BOOTHROYD ROOM, PORTCULLIS HOUSE*

(Please recheck the room allocation on <http://www.scienceinparliament.org.uk> on the day)

CARBON CAPTURE AND STORAGE – WILL IT WORK?

Addresses by

Charles Hendry MP
Shadow Minister for Energy

Dr Andy Read
E.ON UK Clean Coal Development Manager, Project Manager, CCS Project
Kingsnorth Power Station, Kent

Although CO₂ has been injected into geological formations for various purposes, the long term storage of CO₂ is a relatively untried concept. The UK has recently given approval for three new powerplants with space available for retrofitting Carbon Capture and Storage, in addition to the E.ON Kingsnorth Power Station. They are the 2,000 MW Combined Cycle Gas Turbine power station at Pembroke, South West Wales to RWE npower, a 900 MW integrated coal gasification gas-fired power station at Hatfield, Yorkshire to Powerfuel Power, and a 1,020 MW Combined Cycle Gas Turbine power station at King's Lynn, Norfolk to Centrica Leasing. Each power station agreed during the planning process that they have enough available land to retrofit CCS plants in the future.

CCS applied to a modern conventional power plant could reduce CO₂ emissions to the atmosphere by approximately 80-90% compared to a plant without CCS. The IPCC estimates that the economic potential of CCS could be between 10% and 55% of the total carbon mitigation effort until year 2100. Capturing and compressing CO₂ requires much energy and would increase the fuel needs of a coal-fired plant with CCS by 25%-40%. These and other system costs are estimated to increase the cost of energy from a new power plant with CCS by 21-91%. These estimates apply to purpose-built plants near a storage location; applying the technology to pre-existing plants or plants far from a storage location will be more expensive. However, recent industry reports suggest that with successful research, development and deployment, sequestered coal-based electricity generation in 2025 will cost less than unsequestered coal-based electricity generation today.

IAN TAYLOR MBE MP
Chairman

The Meeting will be followed by an informal reception in the Club Room, 1 Parliament Street

*Portcullis House is on the corner of Bridge Street and Victoria Embankment; the entrance is on Victoria Embankment.
The Boothroyd Room is on the first floor.