

Coal Research Forum

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Update on CCS Policy from a UK Government Perspective

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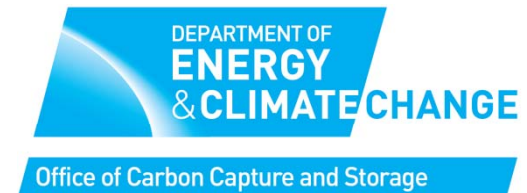
- “For the past decade, **coal has been the fastest-growing global energy source, meeting 47% of new electricity demand. Extensive deployment of CCS is critical to achieve climate change goals:** around 100 large-scale projects are needed by 2020, but countries must accelerate their policy and funding support for the large-scale CCS demonstrations.”

(IEA Clean Energy Progress Report, April 2011)

Today:

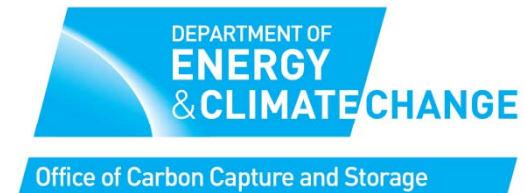
- Wider changes to energy market
- CCS Demonstration Programme
- CCS going forward

Wider changes to the energy market...



- **Carbon Price Floor** (announced Budget 2011)
 - Fuel duty levied on all fossil fuels used in UK to generate electricity
 - More certainty and support to the carbon price will help provide better returns and lower costs of capital for low carbon investors.
 - **From 1 April 2013** ensure the combined carbon price starts at **£16/tonne** and steadily rises by £2 every year; target price of **£30/t by 2020**
 - Government intends to introduce relief for CCS
- **Electricity Market Reform** (consultation closed 10 March)
 - Existing market will not deliver scale of long-term investment in CCS, renewables, nuclear
 - **Emissions Performance Standard:** Limit amount of CO₂ released into atmosphere. Consulted on two limits:
 - 600g CO₂/kWh
 - 450g CO₂/kWh
 - White Paper late Spring 2011

Government committed to 4 demonstration projects

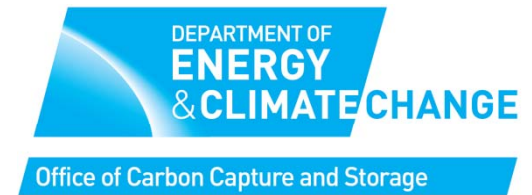


- Government remains committed to providing public funding for four CCS demonstration plants
- **Project 1**
 - £1bn Government funding commitment for capital costs
 - Expect to complete contract negotiations by end 2011
- **Projects 2 – 4**
 - Funded through general taxation, not a CCS levy
 - Further information published Dec 2010
 - Launch competition 2011
- **NER300**
 - “**New Entrants Reserve**”: Fund worth between EUR4.5 billion and EUR9 billion to support carbon capture and storage (CCS) and innovative renewable projects across the European Union.
 - 9/22 CCS projects from UK:
 - 7 coal-fired power stations; 2 gas-fired plants;
 - 2 retrofits to existing power stations; 7 are new power plants
 - 5 pre-combustion, 3 post-combustion and 1 Oxyfuel

Commercial scale demonstration: Project 1 proposal (not yet confirmed)



Ongoing R&D



Ferrybridge: UK's largest pilot plant demonstrating post combustion capture

- £6.3m Government funding (DECC, TSB, Northern Way)
- Partners include SSE, Doosan Babcock and Vattenfall.
- Capacity to capture 100 t/d CO₂. Equivalent to 5Mwe
- Test operations to start Autumn 2011

Doosan Babcock oxyfuel combustion demonstration

- Suitable for new power plants and for retrofit applications

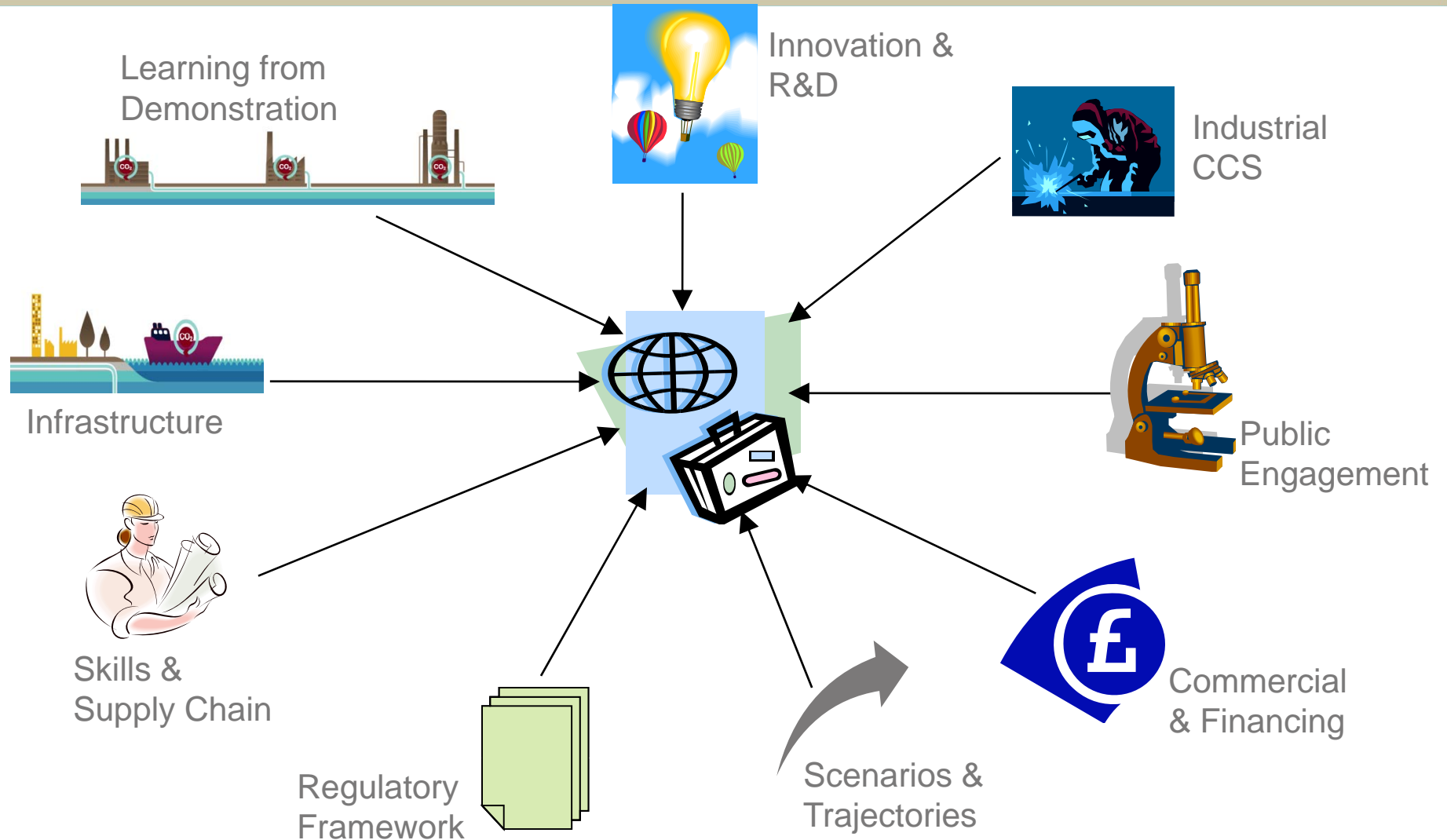
DECC contribution to certain Technology Strategy Board projects



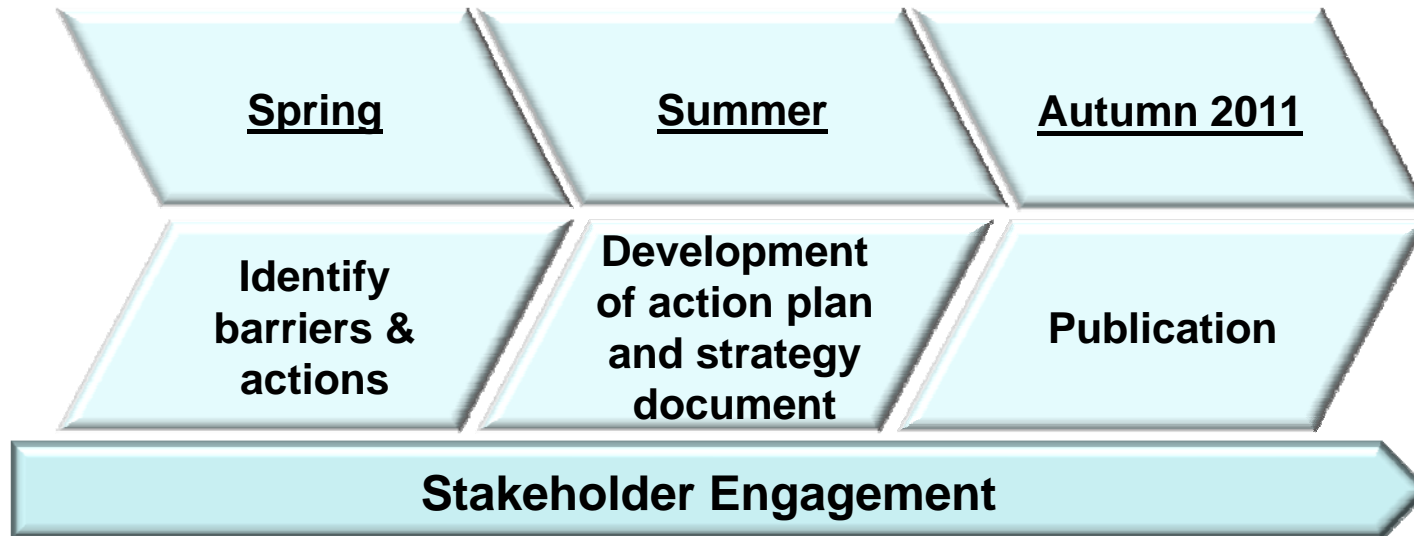
- Outline scenarios and trajectories for CCS deployment needed to meet emissions targets in 2050
- Set framework for Government and private sector actions over coming decade
- Describe a shared understanding between Government and key stakeholders of the issues that need to be addressed, by when and the organisations responsible for taking action

What will the Roadmap do?

- Workstreams



Timeline and Stakeholder Engagement



- OCCS will engage stakeholders as workstreams are taken forward – intend to hold workshops in first half of 2011
- Intend to publish at the 2011 CCS Stakeholder Conference in Autumn