

Terms of Reference for the CCS Cost Reduction Task Force

The Carbon Capture and Storage (CCS) Cost Reduction Task Force is an industry-led joint task force established by Government to assist with the challenge of making CCS commercially available for operation by the early 2020s.

The Government is reforming the electricity market with the aim of providing a framework that will facilitate low carbon investment, including in CCS. The Government's objective is to have competition between low carbon generation technologies in the 2020s with the market deciding which of the competing technologies delivers the most cost-effective mix of supply and ensures a balanced electricity system. If CCS-equipped power stations are to play a significant role in the electricity market they will need to be cost-competitive with these other technologies.

In the industrial sector CCS provides one of the main opportunities for significant emissions reduction to mitigate the increasing cost of carbon. Cost reduction is essential to ensure that the UK industrial sector can be decarbonised at least cost and remains competitive.

The Government has launched a CCS Commercialisation Programme with £1bn in capital funding which aims to support practical experience in the design, construction and operation of commercial scale CCS. To avoid any conflicts of interest the Task Force will not advise the Government on development of that programme.

Objective

The objective of the Task Force is to publish a report to advise Government and industry on reducing the cost of CCS so that projects are financeable and competitive with other low carbon technologies in the early 2020s.

Key Activities

The Task Force will:

- A. identify and quantify the key cost components of CCS and the key cost reduction opportunities;
- B. describe routes to realising these cost reductions and the actions required from industry and Government;

- C. seek commitment from industry on initiatives to reduce cost and the steps Government could take to establish the right market framework and incentives to encourage industry to invest; and
- D. Present to DECC Ministers:
 - i. Interim findings, by Autumn 2012, setting out the opportunity and the planned programme of work; and
 - ii. A final report, in early 2013, setting out findings and recommendations for action by Government and industry.

Structure

Charles Hendry, the Minister for Energy has asked Dr Jeff Chapman, Chief Executive Officer of the Carbon Capture and Storage Association, to chair the Task Force.

The Task Force will consist of around 20 members taking into account recommendations received following discussion between DECC, the Chair and representatives from industry. Industry members will be expected to have the influence to help drive delivery of the vision and action plan, and they will be asked to take a broad and strategic view of the issues.

The Task Force membership will include experience of full chain CCS project development (engineering, commercial and financial) as well as all the main contributors across the CCS chain, including power generators, industrial sources, CCS project developers, capture technology manufacturers, CO₂ pipeline operators and storage related specialists.

The Task Force meetings will be attended by Patrick Dixon, Expert Chair of the OCCS.

The Task Force will involve the wider industry in deliberations through one or more wider 'summit' meetings and working groups set up to address priority areas. The Task Force will seek feedback and involve wider industry and the academic community as it deems appropriate.

The Task Force will be independent of other stakeholder groups such as the CCS Development Forum but will feed back its findings to that group.

The work of the Task Force may use, but not be limited to, the Demo 1 FEED studies, the PB Power and Mott MacDonald studies of the cost of technologies sponsored by DECC and the ZEP cost report. The Task Force may comment on any disparity on cost ranges from those reports.

Workstreams

Planning and Infrastructure

- Transport – routing and size optimisation of pipelines, both onshore and offshore, and comparison to shipping
- Storage – location options, special planning, reservoir types
- Enhanced Oil Recovery
- Economies of scale
- Marginal costing on joining infrastructure
- Supply chain capacity

Commercial Issues

- Financial models
- Contracts
- Capitalisation
- Incentives
- Risk allocation
- Storage risk and liabilities

Generation and Capture

- Cost reduction analogues (e.g. FGD)
- Review established technologies
- New capture technologies under development
- Parasitic load
- Dispatch – improving flexibility of technology
- Industrial applications
- Research and development priorities