



Department for  
Business, Energy  
& Industrial Strategy

# CCUS COST CHALLENGE TASKFORCE

Second Meeting – Summary



15th March 2018

The Chair welcomed members to the second meeting of the Taskforce and asked each workstream lead to provide an update to the Taskforce.

### **1. Workstream 1 (Deployment Pathway Options and Value of CCUS) – Patrick Dixon**

- The Taskforce considered the value that CCUS could provide to the UK in producing low-carbon industrial products and energy vectors and discussed whether this value could be maximised by CCUS implementation in clusters. This included considering the pace and scale of CCUS implementation and when implementation is needed.
- The Taskforce discussed five potential deployment pathway options:
  - o Wait for better technology;
  - o Store CO<sub>2</sub> elsewhere;
  - o UK anchor project;
  - o Hydrogen as an anchor; and
  - o Enhanced oil recovery.

### **2. Workstream 2 (Finance, Legal and Risk) – Allan Baker**

- The Taskforce discussed the main focus of the workstream – risk – and considering whether there is an irreducible core set of risks.
- It was recognised that there is currently no compelling reason to invest in CCUS, and that the workstream wished to challenge this view from a risk perspective in order that investors could become more bullish.

### **3. Workstream 3 (Project Delivery and Business Models) – Paul Davies**

- The Taskforce recognised the need to offer considerations about the criteria with which Government should evaluate available business models.
- The workstream is testing different models, but indicated that it was likely to suggest that a separation of transport and storage infrastructure from capture of CO<sub>2</sub> was needed as well as testing whether different business models for capture applications was needed.
- It was suggested that transport and storage infrastructure could become an enabler for decarbonisation of clusters.

### **4. Workstream 4 (Innovation and New Technologies) – Laura Sandys**

- The Taskforce discussed the opportunities for supply chain benefits arising from introducing technology standards.
- The workstream outlined their emerging thoughts on CCUS innovation which include the proposal to establish a series of CCUS Challenges, including on capture, storage capacity, hydrogen, negative emissions, and utilisation diversity.
- The Taskforce also discussed the proposal to establish an innovation unit to form a knowledge sharing hub, drawing on expertise from the Energy Systems Catapult.
- It was noted that it will be important to link innovation to the Industrial Strategy and Clean Growth Strategy to show where productivity improvements can be made.

- A request was made for Taskforce members to contribute case studies to be used in the final report.

## Discussion round potential business models to propose in Report

- A discussion was held on a potential business model for CCUS which would involve a separate business model for transport and storage infrastructure from capture. In general, the Taskforce was in agreement that this proposal was positive.
- Discussion followed on whether an anchor project would be necessary to support the first CCUS deployment. In discussion, the Taskforce considered the use of the term 'catalyst' in place of 'anchor' to recognise the ability of a large capture project to 'catalyse' a CCUS cluster and enable smaller projects to follow.
- Patrick Dixon set out thinking on potential future sources of funding for CCUS.

## Actions

- Taskforce members to input their views on the deployment options outlined by Patrick Dixon.
- Taskforce members to contribute case studies to Laura Sandys.
- Workstream leads to meet BEIS Heat team to discuss opportunities for CCUS in the heat sector that BEIS is considering.
- Paul Davies to discuss proposed criteria for evaluating potential clusters at the next Taskforce meeting.
- Taskforce members to contribute relevant images to Kirsty Anderson (Global CCS Institute).
- Taskforce members to volunteer support for report drafting to workstream leads.

## Attendees

- Charlotte Morgan – Linklaters
- Patrick Dixon – Independent
- Paul Davies – Independent
- Laura Sandys – Challenging Ideas
- Allan Baker – Société Générale
- Matt Taylor – Deputy Director of Clean Electricity, BEIS
- Will Lochhead – BEIS
- Dalia Majumder-Russell – Linklaters
- Jo Coleman – Shell
- Gardiner Hill – BP
- Lamberto Eldering – Statoil
- Stephanie Hazell – OGCI Climate Investments
- Damien Hawke – Cadent Gas

- Jeremy Nicholson – Energy Intensive Users Group
- Susie Wood – BHP
- John Scowcroft – Global CCS Institute
- Kirsty Anderson – Global CCS Institute
- David Reiner – Cambridge University
- Dustin Benton – Green Alliance
- Luke Warren – Carbon Capture & Storage Association
- Angela Whelan – Ecofin Foundation
- John Scott – Zurich
- Aniruddha Sharma – Carbon Clean Solutions
- Simon De Vall – BOC Linde
- Sam French – Johnson Matthey
- Paula Carey – Carbon8 Systems
- Sam Gomersall – Pale Blue Dot
- Aslak Viumdal – Gassnova
- Jon Gibbins – UKCCSRC
- Geoffrey Maitland – Imperial College London
- Debbie Stockwell – Sandbag
- Jason Golder – The Crown Estate
- Tom Mallows – Crown Estate Scotland
- Stuart Haszeldine – Scottish CCS
- Bill Spence – OGCI
- Stuart McKay – Scottish Government
- Barbara Vest – Energy UK
- Stephen Kerr – Summit Power
- Bryony Livesey – Costain
- Jacqueline Redmond – Macquarie
- George Day – Energy Systems Catapult

## Observers

- Nikki Brain – Carbon Capture & Storage Association
- Hannah Crompton – Carbon Capture & Storage Association
- Gavin Jackson – Linklaters
- Andrew Bullimore – Oil and Gas Authority
- David Fielder – BEIS
- Jonathan Baker-Brian – BEIS

## Apologies

- Ian Temperton – Independent
- Dominique Copin – Total
- Paul Booth – Tees Valley Combined Authority

- Richard Leese – Mineral Products Association
- Duccio Manetti – Baker Hughes GE
- Rodney Allam – 8Rivers & NetPower
- Matthew Knight – Siemens
- Nicola Pitts – National Grid
- Chris Williams – Tata Steel
- Trude Sundset – Gassnova
- Alan James – Pale Blue Dot