



House of Commons  
Energy and Climate Change  
Committee

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**The future of carbon  
capture and storage in  
the UK: Government  
Response to the  
Committee's Second  
Report of Session 2015–16**

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**First Special Report of Session  
2016–17**

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## The Energy and Climate Change Committee

The Energy and Climate Change Committee is appointed by the House of Commons to examine the expenditure, administration, and policy of the Department of Energy and Climate Change and associated public bodies.

### Current membership

[Angus Brendan MacNeil MP](#) (*Scottish National Party, Na h-Eileanan an Iar*) (Chair)

[Rushanara Ali MP](#) (*Labour, Bethnal Green and Bow*)

[Tom Blenkinsop MP](#) (*Labour, Middlesbrough South and East Cleveland*)

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[Mr Jamie Reed MP](#) (*Labour, Copeland*)

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[Julian Sturdy MP](#) (*Conservative, York Outer*)

### Powers

The Committee is one of the departmental select committees, the powers of which are set out in House of Commons Standing Orders, principally in SO No 152. These are available on the internet via [www.parliament.uk](http://www.parliament.uk).

### Publication

Committee reports are published on the Committee's website at [www.parliament.uk/ecc](http://www.parliament.uk/ecc) and in print by Order of the House.

Evidence relating to this report is published on the [inquiry publications page](#) of the Committee's website.

### Committee staff

The current staff of the Committee are Dr Farrah Bhatti (Clerk), Gavin O'Leary (Second Clerk), Dr Marion Ferrat (Committee Specialist), Stephen Habberley (Committee Specialist), Joshua Rhodes (Committee Specialist), Jamie Mordue (Senior Committee Assistant), Henry Ayi-Hyde (Committee Support Assistant), and Nick Davies (Media Officer).

### Contacts

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## First Special Report

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On 10 February 2016 the Energy and Climate Change Committee published its Second Report of Session 2015–16, Future of carbon capture and storage in the UK (HC 692). On 28 June 2016 the Committee received the Government's response to the Report. It is appended below.

## Appendix: Government response

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### Introduction

1. The Government welcomes the Energy and Climate Change Committee's report on Carbon Capture and Storage (CCS). The Government views CCS as having a potentially important role in the long-term decarbonisation of the UK's economy. However, CCS is currently too expensive and costs must come down.
2. As part of the Government's efforts to reduce the deficit, we had to take tough decisions to prioritise Government spending. This included how we spend money on supporting developing energy technologies. As a result, the Government chose to no longer make available capital funding to support the two CCS Competition projects and took the decision to close the CCS Competition in early 2016 as it became clear that neither project would proceed. No other CCS investment or activity was curtailed.
3. The Government recognises that CCS can play a role in ensuring the long-term competitiveness and decarbonisation of energy intensive industries and the longevity of North Sea industries, which are a vital part of our economy. Equally, we know that while CCS projects are happening globally, more innovation is needed to reduce costs.
4. This is why we are committed to working with industry to bring forward innovative ideas for reducing CCS costs and exploring other potential approaches including the potential to develop markets for CO<sub>2</sub> and provide new sources of revenue. We have invested over £130 million in Research and Development since 2011, including £1.7 million investment in October 2015, through the Department of Energy and Climate Change's (DECC) Energy Entrepreneurs Fund, to support three innovative CCS technologies<sup>1</sup> – Carbon Clean Solutions, C-Capture Ltd and FET Engineering Ltd – all with the potential to reduce costs. We have also invested £2.5 million in a storage appraisal project in the North and Irish Seas (published on 12 May<sup>2</sup>) which identified five promising CO<sub>2</sub> stores.
5. The Department of Energy & Climate Change (DECC) continues to support, jointly with the Scottish Government, the CCS developer Summit Power, with £4.2 million funding<sup>3</sup>, to undertake industrial research and feasibility work at their proposed CCS Caledonia Clean Energy Plant in Grangemouth, Scotland.
6. DECC, with the Department for Business Innovation and Skills (BIS) and industry, are also working jointly to publish Action Plans on decarbonisation and energy efficiency in key energy intensive industries by the end of 2016. The Action Plans will set out how

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<sup>1</sup> <https://www.gov.uk/guidance/uk-carbon-capture-and-storage-government-funding-and-support>

<sup>2</sup> <http://www.eti.co.uk/wp-content/uploads/2016/04/D16-10113ETIS-WP6-Report-Publishable-Summary.pdf>

<sup>3</sup> Of this, DECC is contributing £1.7 million

progress could be made to help enable the transition towards a low carbon economy with a competitive industrial sector as well as short-term steps the Government, industry and others could take during this Parliament to ensure continued progress.

7. It is also important to note that the Oil and Gas Authority (OGA) has statutory responsibility for issuing CO<sub>2</sub> storage site licences and approving CO<sub>2</sub> storage permit applications. Through the Energy Act 2016, the Government has ensured that the OGA is required to have regard to the storage of CO<sub>2</sub> when exercising its functions and to consider the reuse of infrastructure throughout the decommissioning process. The OGA will also examine further the potential of CO<sub>2</sub>-enhanced Oil Recovery working closely with both the CCS and oil and gas industry.

8. Additionally, the Government is working with international partners, supporting CCS capacity building, on small-scale demonstration projects and research through the Government's International Climate Fund, working with Mexico, Indonesia, China and South Africa. We also continue to work with, and learn from, other countries in Europe and globally, as well as through the Carbon Sequestration Leadership Forum.

9. In parallel, DECC continues to provide support to the CCS Advisory Group chaired by Lord Oxburgh, whose findings and recommendations will inform our thinking on the way forward for CCS.

10. We recognise that the Committee and CCS industry would like Government to set out its approach to CCS as soon as possible. We are looking very carefully at all options in developing our approach to CCS and will set this out in due course.

## **Government response to the Committee's conclusions and recommendations**

**Recommendation 1: The lack of engagement by DECC prior to, and since, the announcement has damaged Government's relationship with the very stakeholders it will depend upon to develop CCS technologies. DECC must now work to mend bridges and proactively engage with industry in a consultative way to discuss the next steps for businesses involved with the development of CCS in the UK, whether through workshops, meetings or consultations. (Paragraph 17)**

11. As stated above, the decision on the CCS Competition was a tough one in the context of the need to reduce the deficit.

12. Throughout the CCS Competition the Government held discussions on a regular basis with both bidders - Shell and Capture Power Ltd - as well as the wider industry with bilateral discussions with prospective CCS developers and through the joint Government-industry CCS Development Forum.

13. The key challenge going forward is how to reduce costs for the various CCS technologies. This means we are continuing to engage with industry on the future of CCS in the UK on that basis. For example, the Minister of State continues to chair, jointly with the Chairman of the CCS Association, the joint industry-Government CCS Development Forum. We are also continuing to engage with academics and innovators in this sector, to establish the potential for new capture technologies and new markets for CO<sub>2</sub> in reducing costs.

14. In addition, Ministers and officials continue to actively engage with the All Party Parliamentary Group on CCS with the Minister of State for Energy attending and speaking at the group's meeting in January this year, while DECC officials presented at the group's most recent meeting on industrial CCS in March 2016.

15. DECC is also providing secretariat support to the CCS Advisory Group chaired by Lord Oxburgh, which brings together Parliamentarians from the major political parties and independent experts to assess the potential contribution of CCS to cost-effective UK decarbonisation. The group was established earlier this year and plans to provide a report on its findings and recommendations to the Secretary of State for Climate Change and Energy this summer.

16. As we continue our work considering the next steps for CCS in the UK we will continue to engage the industry and others building on the engagement we have already undertaken.

**Recommendation 2: We recommend that DECC collects and compiles the lessons learned information as soon as possible, preferably in the first quarter of 2016, and makes it publically available so that a wide group of stakeholders can benefit (paragraph 26).**

17. As part of the CCS Competition, Government co-funded Front End Engineering and Design (FEED) work at both the proposed Peterhead and White Rose CCS projects. Government investment in the FEED work provided valuable information to any future CCS projects, both in the UK and internationally. This detailed engineering, planning and financial work will be valuable to follow-on CCS projects and will aid research and development and innovation in CCS technology.

18. In return for Government investment in the FEED work, both projects were required to deliver a number of “key knowledge deliverables” for publication by DECC for the benefit of the CCS industry. These key knowledge deliverables, covering commercial and financing arrangements; programme and risk management; consents and permitting; technical design, engineering and integration; health and safety; and lessons learnt provide a wealth of information for the CCS industry (both developers and researchers) and are made available on the DECC website<sup>4</sup>. All of the key knowledge deliverables have now been published on DECC's website.

**Recommendation 3: DECC should urgently facilitate discussions between UK developers, the European Commission and the European Investment Bank to keep the NER 300 or other European funding in the UK. It should continue to work with the Commission to identify potential future funding opportunities for CCS projects in the UK. (Paragraph 26)**

19. With regard to the specific European funding awarded to UK CCS projects:

- a) The Don Valley CCS project was awarded a €180m European Energy Programme for Recovery grant in 2009 which contributes towards the feasibility and design phase of the project's development. The award remains in place.

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<sup>4</sup> <https://www.gov.uk/government/collections/carbon-capture-and-storage-knowledge-sharing>

b) The White Rose CCS project was awarded up to €300m in potential NER300 funding in 2013. Officials at DECC are in contact with the European Commission about this.

20. In parallel, the UK is a partner country within the CCSERA-NET, led by the Norwegian Research Council, which was launched in June 2016<sup>5</sup>, to support the development of CCS technology ready for commercialisation.

21. In addition, officials in DECC continue to work closely with their counterparts in other countries with an interest in CCS, to share information and learning. This includes:

a) Working with the Netherlands, Germany, the Flemish Government and Norway, through the auspices of the North Sea Basin Task Force, to draft a joint North Sea CO<sub>2</sub> Transport and Storage Infrastructure Plan by summer 2016. This plan is an important prerequisite for any CO<sub>2</sub> transport infrastructure project bid for Project of Common Interest status, which would enable a fast-track planning process and access to Connecting Europe Facility funding.

b) Hosting the mid-year meeting of the US-led Carbon Sequestration Leadership Forum in June 2016. The forum is a ministerial-level international climate change initiative focused on the development of improved cost-effective technologies for the separation and capture of CO<sub>2</sub> for its transport and long-term safe storage.

**Recommendation 4: We recommend that DECC engages with the National Infrastructure Commission to explore options for the development of CO<sub>2</sub> transport and storage. The Commission should consult on whether developing CCS infrastructure should be one of its priority areas (paragraph 34).**

22. DECC will work closely and collaboratively with the Commission, in a spirit of openness and transparency. DECC officials will discuss with the Commission whether it could play a helpful role as we consider the appropriate next steps on CCS. As the Commission will operate as a fully independent body once legislation has been enacted, it will have a high degree of autonomy in organising its work programme.

**Recommendation 5: DECC must now devise a new strategy for carbon capture and storage in conjunction with a new gas strategy, taking into account the infrastructure challenge in the future. DECC should also immediately begin consulting on its CCS strategy as outlined in paragraph 17 and publish this strategy by the summer of 2016, taking stock of the lessons learned documents from the two competition projects, but also after discussions with the wider industry. The strategy must clearly address the following points:**

a) **A detailed reflection and analysis of the lessons learned from the White Rose and Peterhead projects;**

b) **If CCS has a potential role in the long-term, DECC must clarify whether this means in 2020s, 2030s or whether it envisages no need for CCS at all;**

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<sup>5</sup> <http://www.act-ccs.eu/>

- c) **What DECC's plans are for bringing forward new gas-fired power stations, how much of this new generating capacity is expected to be retrofitted with CCS and by when. DECC must then work backwards and explain when the mechanisms for achieving this will be set out;**
- d) **A clarification of whether CfDs for CCS will be available for this and/or the next Levy Control Framework period;**
- e) **A detailed study of the potential of existing and new storage sites in the North Sea, including an analysis around the risk of losing access to North Sea storage as platforms get decommissioned;**
- f) **Details of what is required for the development of industrial CCS in the UK. (Paragraph 34)**

23. The Government views CCS as having a potentially important role to play in the long-term decarbonisation of the UK's economy. We are currently looking very carefully at all options for the next steps for CCS in the UK and will provide further details in due course.

24. As we do this, Government will continue to engage the CCS industry as a priority and we will ensure that: (i) the learnings attained through the CCS Competition; (ii) this Committee's recommendations on the points Government needs to provide clarity on; and (iii) the findings and recommendations from Lord Oxburgh's CCS Advisory Group, all inform our thinking in developing the Government's approach to CCS.

**Recommendation 6: We also note that December 2009 report by the working party, assembled by Lord Oxburgh, on 'the arrangements needed to develop the infrastructure for carbon capture and storage in the UK', which recommended setting up a National Carbon Storage Authority, and we urge the Government to give serious consideration to this recommendation (paragraph 37)**

25. We note the recommendation made by Lord Oxburgh to set up a National Carbon Storage Authority and will consider his recommendation as we continue to look carefully at all the options for developing our approach to CCS.