



*Carbon Capture &
Storage Association*

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CCSA response to the Parliamentary Advisory Group on CCS report

On the 12th September 2016, the Parliamentary Advisory Group on CCS (PAG) chaired by Lord Oxburgh published its final report to Government “Lowest Cost Decarbonisation for the UK: The Critical Role of CCS”¹. The report sets out the case for CCS in the UK and recommends a six point plan for delivering a successful CCS programme.

The CCSA has now concluded its analysis of the PAG report and its recommendations. The CCSA position on the report is set out below:

1. The first CCS projects can be developed at a cost that is competitive with other low carbon technologies

The PAG report set a challenge for CCS, to ensure that the costs of the very first CCS power projects can be delivered at or below a CfD strike price of £85/ MWh.

The CCSA has concluded its analysis and agrees with the key conclusion of the PAG report that the first CCS projects [in the UK power sector] can be developed at a cost that is competitive with other low carbon technologies. A number of factors contribute to the delivery of cost-competitive CCS:

- Projects are built at commercial scale
- Projects are optimally located
- Developers have access to a lower cost of capital
- Projects operate as baseload power plants
- Projects operate under a 20 year CfD contract length

The factors above can be influenced by the design of the CCS programme. However there are other variables, such as the gas price, which are influenced by international markets and cannot be controlled by the government or the private sector. For example, the PAG report £85/MWh CCS strike price target is deliverable with the average gas price seen in 2015 (47 p/th) – which is similar to the gas price in early 2017. However, the Department for Business Energy and Industrial Strategy (BEIS) assumes a central gas price forecast which reaches 62 p/th by 2030². This has the effect of increasing the required CCS strike price to £92/MWh.

¹ <http://www.ccsassociation.org/news-and-events/reports-and-publications/parliamentary-advisory-group-on-ccs-report/>

² <https://www.gov.uk/government/publications/fossil-fuel-price-assumptions-2016>

2. The state will need to take an enhanced role in developing transport and storage infrastructure

The CCSA supports the conclusion of the PAG report that it will be necessary for government to underwrite the costs and risks of developing, operating and investing in the initial infrastructure for the transport and storage of CO₂. Early investment in CCS infrastructure is critical to realise cost reductions and ensure least-cost decarbonisation for industry, heat and power.

This infrastructure investment will take a number of years to deliver and establishing a plan and process for such development now is therefore extremely important. The analysis also indicates that investment in power generation and CO₂ capture might be best achieved through investment either by the government, or alternatively by the private sector. The PAG report recommends the establishment of a CCS Delivery Company comprised of two parts; “PowerCo”, tasked with delivering the anchor power projects at CCS hubs, and, “T&SCo” tasked with delivering the transport and storage infrastructure for all sources of CO₂ at such hubs. The PAG report also recommends that the UK CCS industry should operate under a regulated return style of economic framework.

There is an urgent need to review the business models for capture, transport and storage and the CCSA recommends that Government and industry should work together to consider the options described above. This work should be undertaken as a priority.

3. Industrial CCS and Heat

The PAG report emphasises the fact that CCS is essential for least-cost decarbonisation of energy intensive industries, as many of these industries create CO₂ as a by-product, which is unavoidable for the foreseeable future. These industries contribute a significant number of jobs and GVA to the UK economy, and CCS therefore has a role to play in ensuring a long-term sustainable future for these industries.

Industrial CCS projects can deliver very low cost emissions abatement – especially compared with other current options for CO₂ reduction. These projects will be critically dependent on access to CO₂ transport and storage infrastructure in order to realise these benefits. In addition, there is currently no incentive for industrial emitters to invest in CO₂ capture. We agree with the PAG report that consideration needs to be given to the incentive mechanism that will encourage industrial emitters to invest in CO₂ capture. This needs to take into account the fact that industrial emitters cover many sectors (such as steel, cement and chemicals), with different capture technology requirements and at different stages of development.

The PAG report also points out that heat could be the most important sector for CCS in the long-term. This is particularly due to the fact that Steam Methane Reforming of natural gas with CCS is currently the best option for producing large-scale, low-cost, clean hydrogen – which can then be used to decarbonise heat (and transport). However, decisions on how to decarbonise heat will need to be taken in the early 2020s and the PAG report states that the option of clean hydrogen with CCS *“is critically dependent on a proven and cost-effective CO₂ transport and storage infrastructure being established by the second half of the 2020s”*. This means that the groundwork to develop the clean hydrogen with CCS option must be laid now. We urge the Government to consider the options for developing clean hydrogen with CCS (including the PAG report recommendation to establish a “Heat Transformation Group”).

Conclusion

The PAG report looked at the need for CCS – particularly in light of the cancelled CCS competition and the Paris 2015 agreement. The PAG report concluded that CCS is *“an essential component in delivering lowest cost decarbonisation across the whole UK economy”*.

The recommendations in the report are new and bold, with innovative approaches to delivering CCS in the industry, heat and power sectors.

The CCSA is keen to work with Government to consider these recommendations and identify a fresh approach to CCS that realises its tremendous benefits to reducing emissions and delivering a truly sustainable industrial strategy for the UK.