

CCS is critical to meeting the net-zero challenge

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The big read "Coal industry stakes survival on carbon capture plan" paints a narrow picture of carbon capture and storage (CCS), its potential and expected role in tackling CO_2 emissions from a variety of sectors. It creates the risk of losing sight of the immense decarbonisation challenge ahead by downplaying the criticality of CCS in a portfolio of climate solutions.

CCS technology is versatile in its application, commercially viable and delivers the large-scale emissions abatement required to meet global climate goals. There are currently 19 large-scale CCS projects operating around the world. Only two of these projects are in coal power generation. The rest of these large-scale facilities capture industrial emissions from natural gas processing units, chemical production, ethanol and steel plants, as well as fertiliser and hydrogen production.

A plethora of science and climate organisations recognise the need for increased deployment of CCS as being critical, including the International Energy Agency and the IPCC, which in its special Report on Global Warming of 1.5°C included CCS in three of its pathways to get to net-zero emissions by the middle of the century. Indeed, the UK Committee on Climate change called CCS "a necessity, not an option" in a report released earlier this year. CCS is the only technology available today to deeply decarbonise heavy industry, including steel and cement.

This conclusion is backed by the Energy Transitions Commission. CCS can also enable carbon dioxide removal to reduce the stock of emissions already in the atmosphere and produce clean hydrogen to supply heating, transport and industrial processes. The statement that CCS is expensive is often put forward. In reality, the cost of deploying the technology varies across industries and will continue to fall as new facilities come online. In certain applications including natural gas processing and ethanol production, the cost can be as low as \$20 a tonne of CO₂ abated.

It is important to recognise that there is no silver bullet to tackling emissions. Delivering our ambitious, global climate targets will only be achieved by going beyond divisive rhetoric and by putting forward a realistic pathway to net-zero – one which embraces a portfolio of solutions including renewables, energy efficiency, nuclear, and CCS.

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