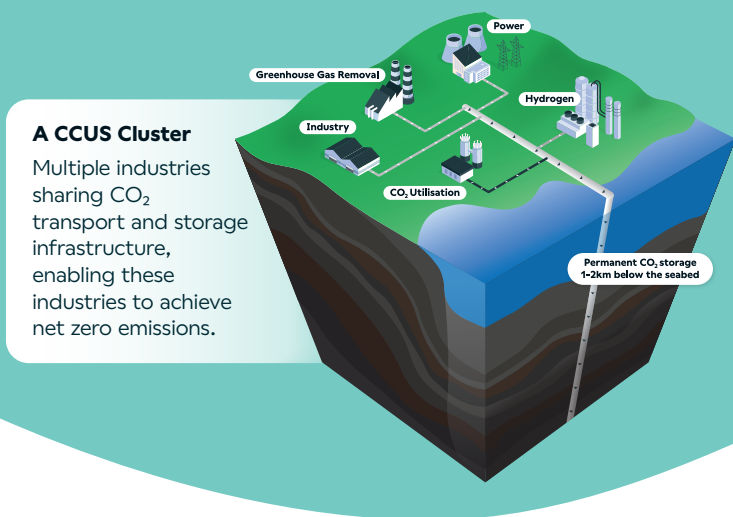


Carbon Capture Utilisation and Storage: Peak Factsheet



What is CCUS?

Carbon Capture, Utilisation and Storage (CCUS)

is the process by which carbon dioxide (CO₂) is captured from the emissions of power generation and industrial processes, or directly from the atmosphere, then either utilised or put into permanent storage.

The main aim of CCUS is to ensure that CO₂ will not enter the atmosphere and contribute to climate change. The most permanent storage is **geological storage** in deep underground rock formations that absorb the CO₂ like a sponge and are typically around 1km below the seabed. These could be either depleted oil and gas fields or saline aquifers.

Captured CO₂ can also be used in products like aggregates, fuels, and baking soda. The more permanent the form of utilisation, the greater the contribution to tackling climate change.

UK deployment of CCUS

The Intergovernmental Panel on Climate Change and the Climate Change Committee have stated that CCUS is a necessity for achieving net zero emissions by 2050¹. In the UK, CCUS is being developed in **regional clusters** to share infrastructure costs and access suitable offshore storage sites. This helps produce premium low-carbon products domestically, driving exports and attracting investment, while avoiding the offshoring of industries.

The UK Government has committed to deploying **four CCUS clusters by 2030**. There are twelve CCUS locations under development in the UK's major industrial regions (see map), of which four have been selected to form part of the Government's CCUS Cluster Sequencing Programme – HyNet (North-West England), East Coast Cluster (Teesside and Humber), Viking (Humber) and Acorn (Scottish Cluster).

There are currently eight capture projects from HyNet North West and the East Coast Cluster negotiating with the Government to build facilities that can begin operating in 2027/2028. These projects will capture just under one third of the UK's 20–30 million tonnes of CO₂ per annum (Mtpa) by 2030 target. The Net Zero Strategy aims to double this to 50–60 Mtpa between 2030 and 2035.

With around 90 Mtpa of projects in development across the UK, a clear and detailed **ten-year plan for CCUS deployment** could deliver this volume and will be essential to maintain investor confidence².

About the CCSA

The Carbon Capture & Storage Association (CCSA) is the lead European association accelerating the commercial deployment of CCUS through advocacy and collaboration and represents over 100 companies investing across the entire CCUS value chain.

¹ Intergovernmental Panel on Climate Change (IPCC). (2018). Special Report on Global Warming of 1.5°C. Available [here](#). "CCS is a necessity not an option", Climate Change Committee (2019) 'Net Zero The UK's contribution to stopping global warming', pg. 23. Available [here](#).

² CCSA. (2021). "CCSA Delivery Plan 2035." Available [here](#). CCSA. (2023). "CCSA Delivery Plan Update 2023." Available [here](#).

CCSA Manifesto: Delivering opportunity & green growth in our industrial communities

As an industry we commit to:

1 Investing in the UK, helping the economy grow stronger by investing up to £30bn private investment by 2030 and £40bn by 2035.

2 Creating high quality jobs & protecting our industries, delivering up to 70,000 new highly skilled jobs and retain approximately 77,000 existing jobs in critical industries like cement, steel and chemicals across the UK.

3 Delivering energy security, by providing flexible, low-carbon power generation, enabling more renewables and energy security.

4 Exporting our expertise in low-carbon products and services. Using our offshore and engineering skills and innovation to export CO₂ services, low-carbon products, engineering skills and services to a global supply chain.

MNZ | Peak Cluster





Peak Cluster brings together five of the UK's leading cement and lime producers; Tarmac, Breedon, Lhoist, Aggregate Industries, SigmaRoc and the low carbon energy project developer Progressive Energy. Peak Cluster will help solve one of the world's biggest climate challenges - reducing the impact of industry on the environment, whilst continuing to manufacture the products we rely on. From 2030, Peak Cluster will utilise Carbon Capture and Storage (CCS) technology to decarbonise 40% of the UK's cement and lime production industry.


The emissions will be safely transported to Morecambe Net Zero (MNZ), a permanent, secure storage site deep under the seabed in the eastern Irish sea.

MNZ (Morecambe Net Zero) is a joint venture between Spirit Energy and shareholders Centrica plc and Stadtwerke München GmbH (SWM). With a mission to provide a permanent decarbonisation solution, Spirit Energy will convert its depleted South and North Morecambe Bay gas fields off the coast of Barrow-in-Furness to provide a permanent, safe and secure, world-class carbon storage, which will sit at the heart of MNZ.

Key benefits include:

 **Industry impact:** Decarbonise 40% of the UK's cement and lime production from 2030.

 **Carbon storage:** Utilising the depleted South and North Morecambe Bay gas fields, MNZ will store 4 million tonnes of CO₂ from Peak Cluster annually from 2030, scaling up to 25 million tonnes by the late 2030s.

 **Capacity:** A billion tonnes of CO₂ storage capacity will be unlocked for the benefit of the UK and beyond - accessible via pipeline, shipping, and rail.



Job creation: Over 13,000 jobs will be created and safeguarded, with an annual increase of £154 million in skills and wage uplifts.



Economic impact: Attracting around £5bn in investment for construction and operations. The project is expected to generate £1.8bn in gross value added and save industries between £34.6 billion and £104bn in Emissions Trading Scheme (ETS) costs.



Export opportunities: The MNZ | Peak Cluster partnership will help position the UK as a leader in CCS technology, potentially generating £30bn annually in export revenues by 2050.



Projects in the MNZ | Peak Cluster