

Bioenergy in Use

Drax aiming to be the world's first negative emission power station - Delivering Bioenergy Carbon Capture and Storage

Drax Power Station, in Yorkshire, has undergone a decarbonisation transition to operate on sustainably sourced biomass wood pellets in place of coal, converting four of its six-generation units. Each one of the four 660 MW biomass units will be fitted with carbon capture and storage (BECCS), becoming operational between 2027 and 2035. Upon completion of this process, the four units will provide 2.4 GW of clean 'firm' power on the system, whilst capturing 16 MtCO₂ per year, creating the world's first negative emissions power station.



In February 2019, Drax announced the operation of their BECCS demonstration plant, using innovative technology developed by Leeds-based C-Capture, to capture a tonne of CO₂ a day during the pilot. This is the first time carbon dioxide gas has been captured from the combustion of a 100% biomass feedstock anywhere in the world.

The CCC's Net Zero report identified BECCS, "as one of the required key near-term actions that are on the 'critical path' towards the UK achieving net zero emissions by 2050", reaffirming its vital role by adding that for industry, hydrogen production, electricity generation and negative emissions technologies, "CCS is a necessity not an option for reaching net-zero GHG (greenhouse gas) emissions".

As such, the deployment of BECCS at Drax Power Station should be considered an 'anchor project' for wider deployment of the technology in the Humber region and further across the UK.

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