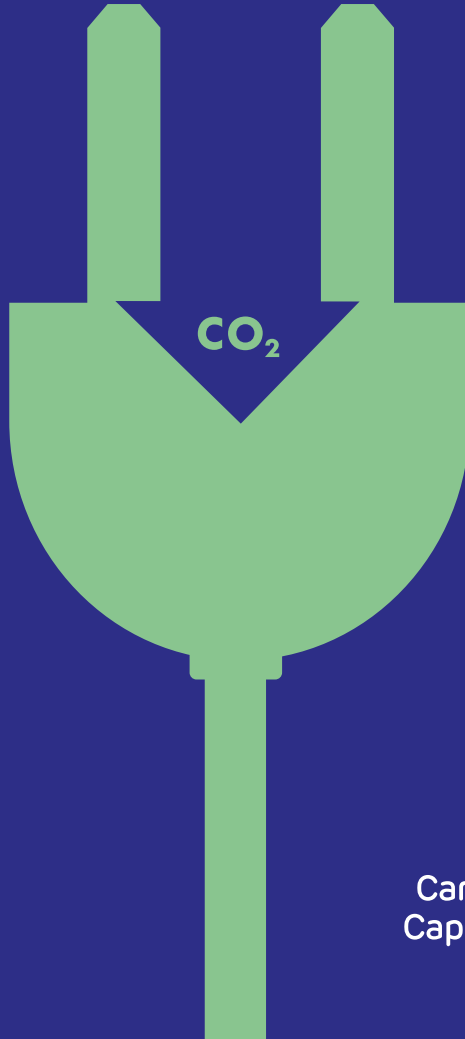


Power up, carbon down:
BECCS at Drax will boost UK
energy security, while supporting
jobs and industries nationwide



Carbon
Capture | by drax



Contents

Introduction to Drax	2
The challenge ahead	4
The importance of carbon removals	6
Pioneering BECCS to help the UK decarbonise	8
Timeline of BECCS	10
Delivering growth and opportunity across the North	12
Helping the UK lead the way in carbon removals	14
Backing BECCS at Drax	16

At Drax we're enabling a zero carbon, lower-cost energy future, with an ambition to become carbon negative by 2030.

Drax provides the single largest source of renewable power in the UK, generating reliable, flexible and dispatchable power even when the wind doesn't blow and the sun doesn't shine.

With a £2.5bn UK investment plan to enhance grid stability and boost energy security, our next chapter will ensure Drax plays a crucial role in reaching net zero and supporting jobs and industries nationwide.



✓ **£2.5bn**

We're investing £2.5bn in enhancing grid stability, boosting energy resilience, and positioning the UK as a global leader in carbon removals and pumped storage hydro. Through pioneering green technology and innovation, we're planning to help the UK decarbonise, creating a path to net zero and beyond.

At this critical time for the UK, Drax is supporting the country by:



Boosting UK energy security



Creating and supporting thousands of jobs across the UK



Pioneering bioenergy with carbon capture and storage (BECCS) to help the UK decarbonise



Making the UK a global leader in climate-saving technologies



Ensuring efforts to achieve net zero are affordable



Back BECCS at Drax to keep the lights on, create jobs and growth and lead the world in carbon removals.
drax.com/BECCS



We're ready to deliver; we have already started building our supply chain and signed a memorandum of understanding with British Steel to explore opportunities to supply UK steel for the project.

We must continue this momentum towards a solution to support security of supply and achieve net zero targets, while also presenting an opportunity for the UK to lead the world in pioneering, climate-saving technology.

BECCS is the most cost-effective carbon removal technology. Deploying it at Drax Power Station will create and support over 10,000 green jobs in the North, putting the UK at the forefront of a climate solution needed to decarbonise economies and support energy security on a global scale. It could also save the UK over £26bn to reach its net zero target¹.

With the right government support and investment framework, Drax could capture eight million tonnes of CO₂ every year with BECCS – delivering Western Europe's largest decarbonisation project and a significant proportion of the carbon removals needed for the UK to reach net zero.

With the right policies to unlock investment, Britain can lead the world in a technology which is urgently needed to prevent catastrophic climate change and deliver clean, secure, lower-cost energy.

We're asking for your support in making BECCS at Drax a reality. Back BECCS at Drax to support energy security, create jobs and opportunities for the North, and make the UK a world leader in fighting the climate crisis.

 **Over £26bn**

Deploying BECCS at Drax could potentially save the UK over £26 billion to help achieve its net zero target.

The challenge ahead

Recent extreme weather events have given governments worldwide a clear warning about the urgent need to tackle climate change. Decarbonising energy is a top priority. However, the ongoing conflict in Ukraine means energy security continues to be a major issue for many countries, including the UK, and emphasises the significance of generating reliable and secure renewable power for households and businesses in the UK.

Now more than ever, the UK must invest in renewables to ensure security of supply and energy resilience. Producing energy domestically is the best way to support energy security – with the added benefit of creating jobs and boosting opportunities up and down the country.

Drax is ready to invest £2.5bn in renewable energy technologies, of which £2bn will be used to develop bioenergy with carbon capture and storage (BECCS) – the only carbon removal technology that also generates renewable electricity. This means that BECCS not only supports energy security, but also removes millions of tonnes of CO₂ from the atmosphere.

In 2023, Drax successfully passed the Government's deliverability assessment for BECCS, further endorsing our capability to turn BECCS at Drax Power Station into a reality. Upon securing the appropriate policy and commercial framework with the UK Government, our BECCS project could start capturing millions of tonnes of CO₂, permanently storing those emissions in geological formations beneath the North Sea.

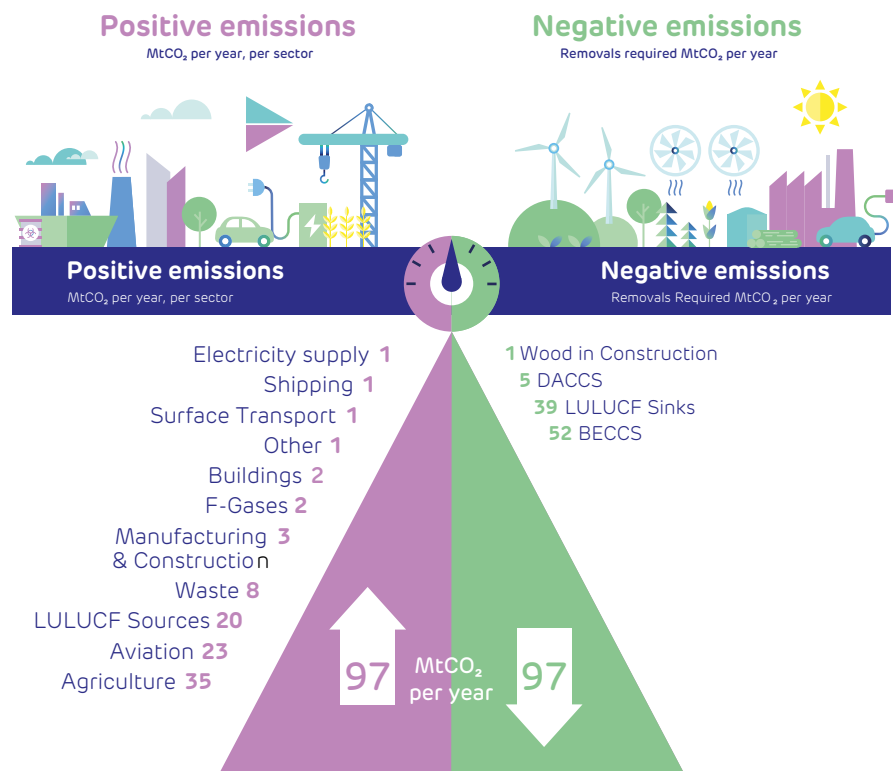


The importance of carbon removals

According to the United Nations Intergovernmental Panel on Climate Change (IPCC), carbon removals technologies like BECCS, which remove carbon from the atmosphere, may be necessary to capture 10 billion tonnes of carbon dioxide annually. This action is essential to prevent catastrophic climate changes between now and 2050².

A combination of carbon removals solutions, including BECCS, direct air capture (DAC), and natural climate solutions, are vital to achieving net zero by 2050³. According to experts, BECCS will be the primary carbon removals solution that can be deployed to help reach this goal.

Climate Change Committee balanced pathway 2050



² Coalition for Carbon removals – The Case for Carbon removals (June 2021, p.9).
³ Coalition for Carbon removals – The Case for Carbon removals (June 2021, p.6).

Carbon removals solutions are crucial in order to:

- ✓ Offset residual emissions and protect jobs in hard to abate sectors such as agriculture, aviation and heavy industry
- ✓ Reduce carbon emissions more quickly, ensuring security on the path to net zero
- ✓ Ensure efforts to achieve net zero are affordable
- ✓ Remove historic emissions already in the atmosphere

Different carbon removals solutions that exist today

BECCS Bioenergy with carbon capture and storage (BECCS) is the process of capturing and permanently storing carbon dioxide (CO₂) that is generated during the production of electricity from sustainable biomass. This is the only carbon removal technology that also generates low carbon renewable power

DAC Direct air capture (DAC) technologies extract CO₂ directly from the atmosphere using either liquid or solid sorbents. While this could offer huge potential, the technology is currently in its infancy and requires substantial investment to make it a more widespread practice. It also requires vast amounts of zero carbon power to operate

NCS Natural climate solutions use natural processes and carbon sinks to remove CO₂. Examples include reforestation, where new trees absorb and store carbon as they grow and seagrasses (vegetation underwater) which can store up to twice as much carbon dioxide as forests on land

Pioneering BECCS to help the UK decarbonise

What is BECCS?

Bioenergy with carbon capture and storage (BECCS) is a method for capturing and permanently storing carbon dioxide (CO₂) from biomass energy generation. Using BECCS, Drax aims to be a carbon negative company by 2030.



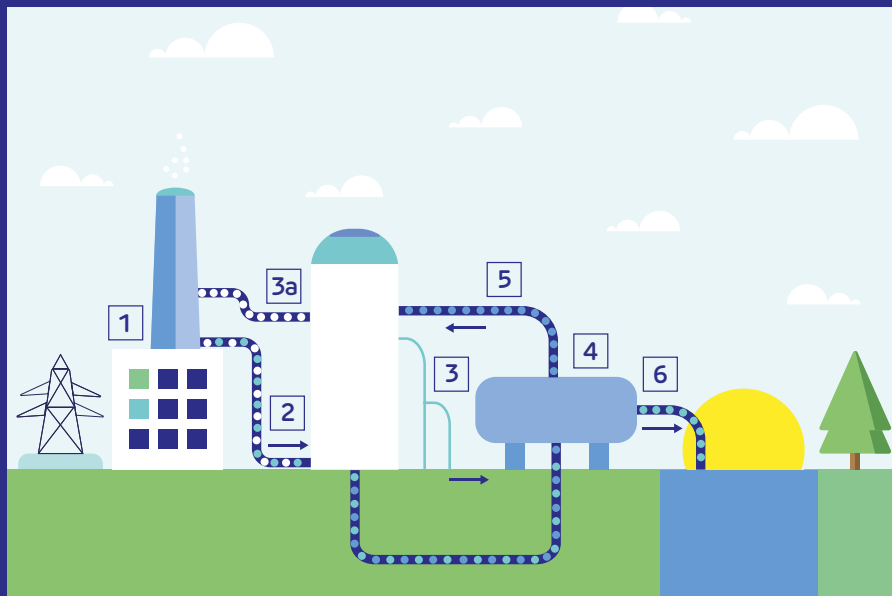
✓ Carbon removals

The process of actively removing CO₂ from the earth's atmosphere.

✓ 53m tonnes

The quantity of CO₂ that could be removed per year by BECCS in the UK is 53m tonnes, according to the CCC.

How carbon is captured from an emissions source



KEY ● Flue gas ● CO₂ ● Solvent

- 1 Flue gas containing CO₂ is captured during the power production process
- 2 The flue gas is cooled and treated before entering an absorber tower
- 3 Inside the absorber tower, a chemical reaction takes place when a solvent is used to extract CO₂ from the flue gas
- 3a CO₂ depleted flue gas is released into the atmosphere
- 4 The solvent containing the CO₂ is heated in a re-boiler, which reverses the chemical reaction separating the CO₂ from the solvent
- 5 The solvent is then re-circulated back into the carbon capture system
- 6 The now pure stream of CO₂ is transported via pipeline for permanent storage underground, under the ocean or sea

Safe and permanent storage

Captured CO₂ is pressurised and turned into a liquid, which can then be safely and permanently injected into naturally-occurring, porous rock formations (such as unused natural gas reservoirs, coal beds or saline aquifers) in a process known as sequestration. The UK has the capacity to hold up to 70 billion tonnes of CO₂ in this way under its seabed.



8Mt

of CO₂ could be captured and stored every year using BECCS carbon removals at Drax.

From coal to biomass to BECCS

Here's a timeline of our progress so far in making BECCS at Drax a reality, and a look ahead at what's still to come.



Delivering growth and opportunity across the North

Developing bioenergy with carbon capture and storage (BECCS) at Drax will deliver significant benefits for local communities and the UK economy, whilst also helping to revitalise the North. The technology will support 10,000 jobs at peak construction and put the Humber region at the forefront of net zero.

Drax already proudly supports 3,550 supply chain jobs in the North and generates £411m for the region's economy. Scaling up BECCS presents an opportunity to extend these benefits further.

We are committed to ensuring that local people living close to our operations are equipped with the skills to take advantage of these opportunities.

Scaling up BECCS will get the UK to net zero faster and at a lower cost. BECCS will kickstart a new green economy in the Humber region, allowing the UK to get ahead in the global race to lead in carbon removals. Crucially, it will start delivering jobs and growth in the next few years.

We're proud to say that we've submitted a Development Consent Order to the Secretary of State and are ready to start construction upon securing the appropriate policy and commercial framework with the UK Government.

✓ **£2bn**

Drax is ready to invest £2bn in BECCS, with an ambition for 80% of our construction spend to go to UK companies.

✓ **10,000 jobs**

BECCS at Drax will support 10,000 jobs at peak construction.



“

BECCS at Drax will bring a lot more jobs to the area and will future proof the company. Hopefully, for people like myself, it will give us jobs for the next 40 years.

”

Lewis Marran
Engineering Apprentice, Drax

Helping the UK lead the way in carbon removals

Developing bioenergy with carbon capture and storage (BECCS) at Drax will put the UK at the forefront of developing and exporting a vital technology needed to combat climate change.

The UK can seize this unique opportunity to lead the world in BECCS technology and tackle the climate crisis – providing we move quickly. In backing BECCS, the UK Government will be prioritising decarbonisation, keeping the costs of net zero down for hardworking families and backing new British technology which can be exported worldwide.

The UK Government's announcement that it is minded to include Greenhouse Gas Removals (GGRs) in the Emissions Trading Scheme is welcome and demonstrates the widening support for carbon removal technologies.

Carbon capture technology is being deployed at scale globally, at power stations and factories, and BECCS is now on a similar journey.

The US is ramping up its research and development of BECCS. Support for biomass and BECCS in the landmark Inflation Reduction Act shows that the US Government thinks the technology is vital to tackling climate change.

With similarly bold and urgent action, the UK can also be a front runner in carbon removals. We want to play our part.

“

It's incredibly powerful for our network to have a business like Drax that can lead in the technology of bioenergy and carbon capture and make such a significant difference to our impact on climate change and the carbon emissions.

”

Diana Taylor
Marketing Humber



Backing BECCS at Drax

As bioenergy with carbon capture and storage (BECCS) at Drax reaches a crucial phase, we need your support. We have already received significant backing from businesses of all sizes, local and national, who have supported our supplier engagement programme.

We are also proud to have the support of local councils, MPs, Chambers of Commerce and educational institutions, such as Selby College, as well as nearly 3,000 local residents and businesses who recognise the impact that BECCS at Drax will have for the region.

Backing BECCS at Drax will not only contribute towards the UK's energy security and net zero ambitions, it will also create jobs and growth nationwide, helping revitalise the North and decarbonise the Humber.

BECCS is the only carbon removal technology that also generates low carbon renewable power. By 2027, the technology could be removing millions of tonnes of CO₂ from the earth's atmosphere.

With your support, we can make this happen.

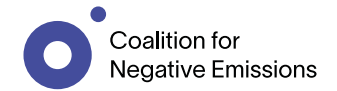
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Boosting skills

We're boosting skills and training with our five-year partnership with Selby College. This partnership will help people in our communities to learn the skills needed to pursue jobs in the green economy. It will also help companies like Drax to continue to grow and build a strong regional economy with thriving communities.



Thanks to our supporters and partners



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