Drax: The world’s first carbon negative energy company

Workshop on CO$_2$ infrastructure and industrial clusters
Welcome to Drax Power Station
The largest single site renewable generator in the UK

4 of 6
645MW boilers converted from coal to sustainably sourced biomass

12%
GB’s renewable electricity in 2019

17,000+
UK jobs directly or indirectly supported by Drax
Committee on Climate Change: The UK needs to scale up carbon removals significantly to achieve Net Zero by 2050
Our BECCS work to date

– **BECCS pilot commissioned January 2019**, capturing one tonne CO$_2$ per day using C-Capture technology – the first 100% biomass CCS pilot in the world.

– **£5m awarded through BEIS CCUS innovation programme** to C-Capture/Drax partnership to test at Tiller in Norway in 2019, scaling up to 100 tonnes per day in Technology Centre Mongstad in 2020/21.

– **Second pilot starting Q4 2020 with Mitsubishi Heavy Industries**, using establish amine-based solvent solution to capture biomass flue gas at Drax.

– **Working with several large industrials in the Humber industrial cluster** to develop a long-term blueprint for developing CO$_2$ transport and storage infrastructure to deliver a **Zero Carbon Humber**.

– Developing thinking around **what a support mechanism for negative emissions would look like** to enable deployment of early carbon removal projects like BECCS in the 2020s.

Our long-term ambition

- **Mid-2020s** deployment of first BECCS unit at Drax (4 Mts CO$_2$ p.a.)
- **Large scale CO$_2$ Transport & Storage network** for Humber industrial cluster, sized, appraised and developed
DELIVERING A NET ZERO CARBON HUMBER IN THE 2030s
The Humber: An Introduction

The Humber is a strategically critical industrial cluster for the UK:

- It contributes £18bn to the economy
- It supports 55,000 jobs in manufacturing
- It has over 100 chemical and refinery companies
- It accounts for over 25% of the country’s refinery production
- It has one of the UK’s two operational steel works

As a result, it is also the most carbon intensive cluster in the country.
The Humber: Proven Partners Committed to Clean Growth
A common CO₂ infrastructure delivering deep decarbonisation in the 2020s

- **Drax Power Station** (Drax) Negative emissions
- **Keadby Power Station** (SSE) Gas CCS
- **Scunthorpe Steel** (British Steel) Low carbon steel
- **Saltend Chemical Park** (Equinor) Hydrogen production
- **Humber Zero** (Vitol) Decarbonising refineries
- **Offshore CO₂ Transport & Storage**
Securing and creating UK jobs in a new market
The Humber: A world leading, zero carbon industrial cluster

✓ Credible, proven partners investing tens of millions of pounds today and hundreds of millions in the future, on projects that will support a green economic recovery.

✓ A common CO₂ transport infrastructure that allows early projects to come online in 2020s and enables the scale-up the cluster in the 2030s.

✓ A diverse range of technologies that support the UK’s role on climate leadership: blue and green hydrogen, negative emissions, clean gas and industrial decarbonisation.

✓ The retention and creation of thousands of jobs in one of the most strategically important clusters in the UK.

✓ The creation of new low carbon products and skills that support the ‘levelling up’ agenda.

✓ Driving inwards investment and enabling the UK to trade green products into the international market.
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