



Building a Net Zero Industrial Cluster

April 2024



The Timeline to Net Zero

2022

A united voice for the Cluster

2023 - 2025

Carbon Accounting

2023 - onwards

Renewable & Sustainable Fuels:
Energy from Waste & Circular Economy

2024

Track 1 Expansion

2024 - 2030

Infrastructure & Planning

2027 - 2030

Net Zero Teesside
Commissioned and Initial Operations

2028 - 2030

Low-Carbon Hydrogen –
Industrial Scale
Production
Commissioned

2030

Tees Valley becomes the first low-Carbon Cluster

2030 - 2040

Negative Emissions
available at Industrial
Scale

2040

Tees Valley becomes the first **Net Zero Cluster**

- Storing **180% of baseline CO2 emissions**
- **£10 billion** invested in decarbonisation
- Creating **30,000 new jobs**
- Increasing GVA by **£34.6 billion**

Economic Benefits

Decarbonisation technologies provide:

New Investment

- Over £10 billion already identified

Limited Policy On

(Track 1 & potential T1 expansion projects)

- 8,500 additional jobs
- £14.7 billion additional GVA (2022-2040)

Full Policy On

(Widespread industrial adoption of net zero technologies)

- 28,800 additional jobs
- £34.6 billion additional GVA (2022-2040)

The Teesside Industrial Cluster

Key

- Existing Pipe Corridors
- Existing Tunnels
- Existing CO₂ Exports
- Ports

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TEES VALLEY
Cities Revealed



- 66 companies
- 5 mile radius
- 8.8 MtCO₂/yr (existing operations & projects in development)
- Key industrial sites
- Teesside Freeport

CHEMICAL CLUSTER



- Key
- Existing Pipe Corridors
 - Existing Tunnels
 - Existing CO₂ Export
 - Ports

Route To Cluster Net Zero



HYDROGEN



RENEWABLE POWER SECTOR



EFW Projects



Offshore Wind



CARBON, CAPTURE, USAGE & STORAGE



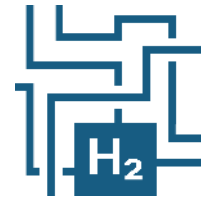
Hydrogen



Region has existing hydrogen storage caverns



Currently produce more than 50% of the UK's hydrogen



Hydrogen pipework connecting major cluster sites



Tees Valley announced as the DfT Hydrogen Transport Test Hub



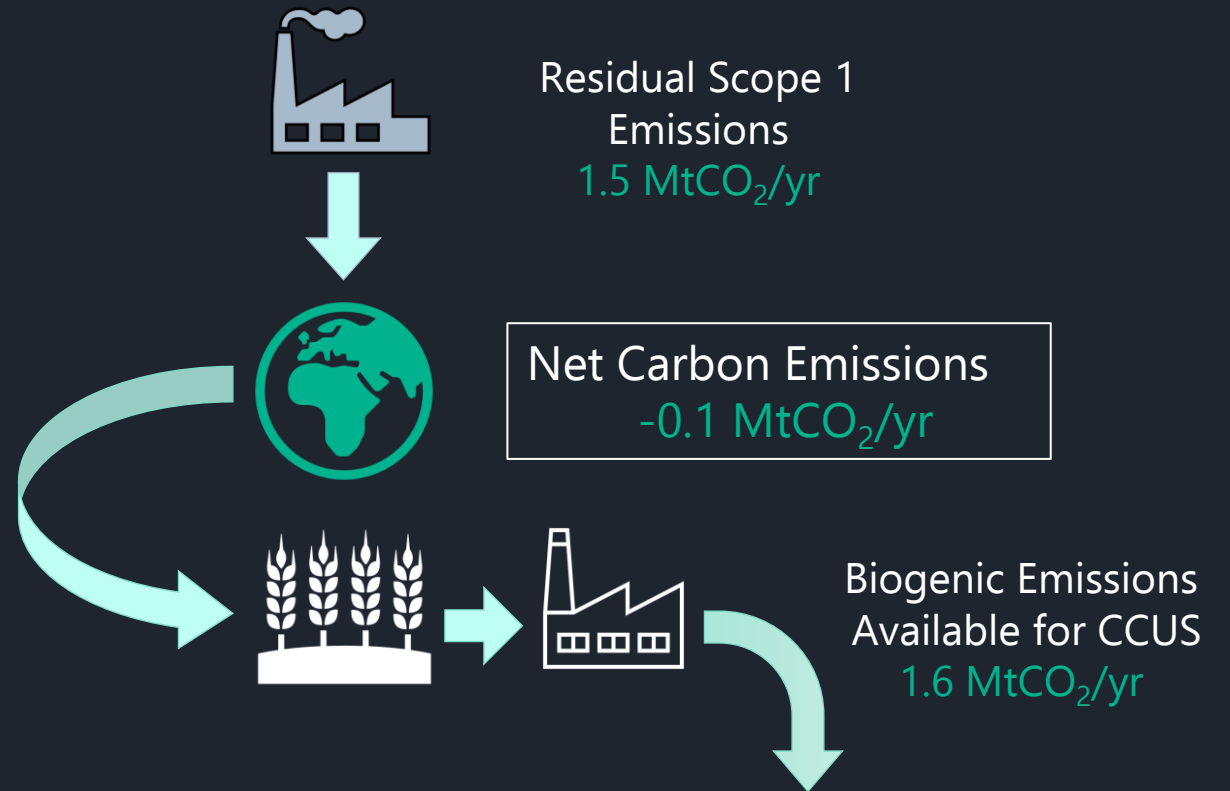
Significant hydrogen production planned on and around Teesworks

Projects

- Blue Hydrogen
 - Kellas (1GW plant)
 - bp (1GW plant)
- Green Hydrogen – linked to renewable energy production
 - Protium (up to 60MW plant)
 - EDF (hydrogen connected near shore wind)
 - bp (500MW)
 - Kellas (1GW)

Net Zero

A route to Net Zero...



East Coast Cluster & Northern Endurance Partnership

The East Coast Cluster was selected by DESNZ as a Track-1 CCUS project in the UK Government's Cluster Sequencing program.

The East Coast Cluster will be enabled by the Northern Endurance Partnership pipeline, connecting the industrial clusters to the *Endurance* saline aquifer

The Northern Endurance Partnership serves as the operator of the full, end-to-end CO2 transport and storage system serving Teesside and the Humber.



Case Study: Sustainable Aviation Fuel

Why Tees Valley

- Already has CO2, green hydrogen, blue hydrogen, bio ethanol, green energy, energy from waste
- UK's first and largest Freeport
- Established chemical and process industry
- Plan for CCUS and industrial decarbonisation
- Teesside Airport – First to sign SAF deal
- DfT's Advanced Fuel Fund has supported 5 Tees Valley Projects with a combined £39m
- Abundia, Alfanar, Arcadia, Nova Pangea, Willis

TEES VALLEY



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