

Net Zero Industry Innovation Centre

Tees Valley: The go-to destination for net zero research & development

The IPCC climate crisis report has delivered a “**final warning**” on the climate crisis, as rising greenhouse gas emissions push the world to the brink of **irrevocable damage** that only **swift** and **drastic action** can avert.

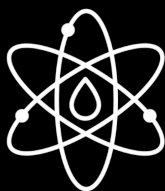


Future-proof your business and play your part in shaping a **cleaner, greener future** for coming generations.

Our Holistic Net Zero Offering



Carbon Capture & Storage



Hydrogen Lab



Smart Energy Systems



Circular Economy Lab



Digital Modelling & Simulation Lab



Business Expertise



Social Research



Creative Industries



Policy & Compliance



NET ZERO
INDUSTRY
INNOVATION
CENTRE



Teesside
University

Our Facilities

nziic.co.uk



European Union
European Regional
Development Fund



**NORTHERN
POWERHOUSE**



TEES VALLEY
COMBINED
AUTHORITY

TEES VALLEY MAYOR

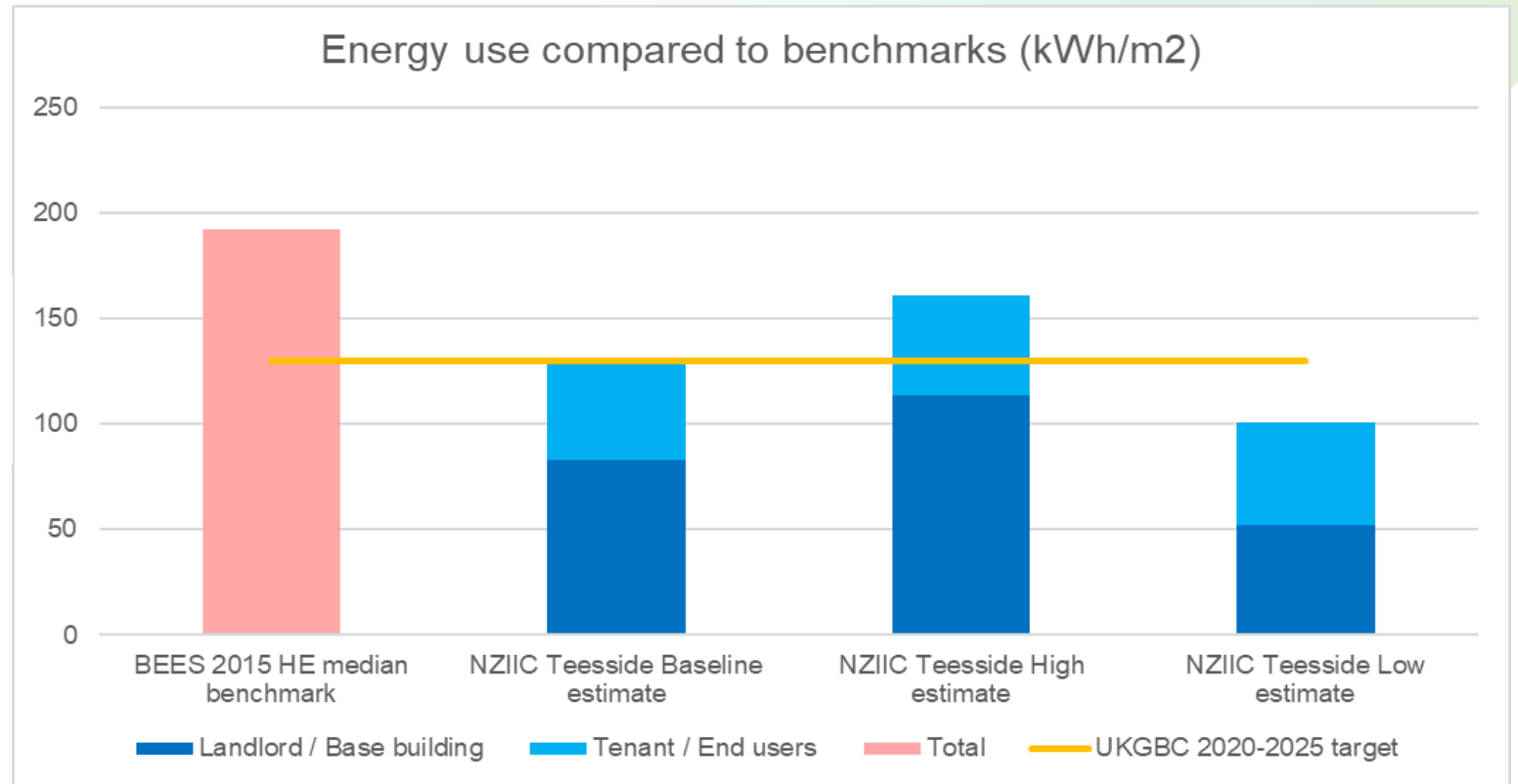
A net zero, net zero centre!



BREEAM 'Outstanding' and Embodied Net Zero Carbon accreditation



Corporate Environmental Award 2023



TEES VALLEY MAYOR

Our Facilities

Hydrogen & Decarbonisation lab for carbon capture and utilisation, hydrogen transportation, geological storage of hydrogen and carbon dioxide, and embrittlement mitigation.

Circular Economy lab for valorisation of waste by-products and building reuse into their product offerings. Thermal processing and chemical processing.

Smart Energy lab for simulation of micro-grids, energy vector integration, and development of smart systems.

Digital lab for advanced modeling and simulation for operating industrial assets, real-time analysis and visualization, assisted operations, technological help, remote operations, and assisted safety systems.

Thermal technologies lab for prevention of corrosion, ceramics production, and enhancement of material performance for energy conversion technology.

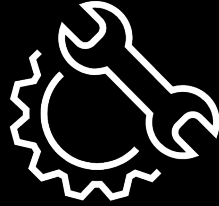


TEES VALLEY MAYOR

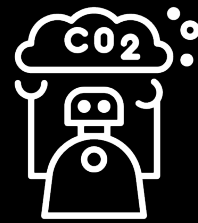
Why Teesside?



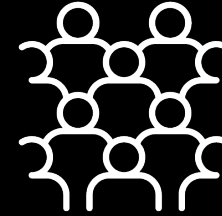
Identified by the UK Government as one of six **major industrial hubs** with the ability to enable **large-scale industrial decarbonisation**.



Teesside has a **proud engineering heritage**, a wealth of natural assets, and an **established industrial ecosystem**.



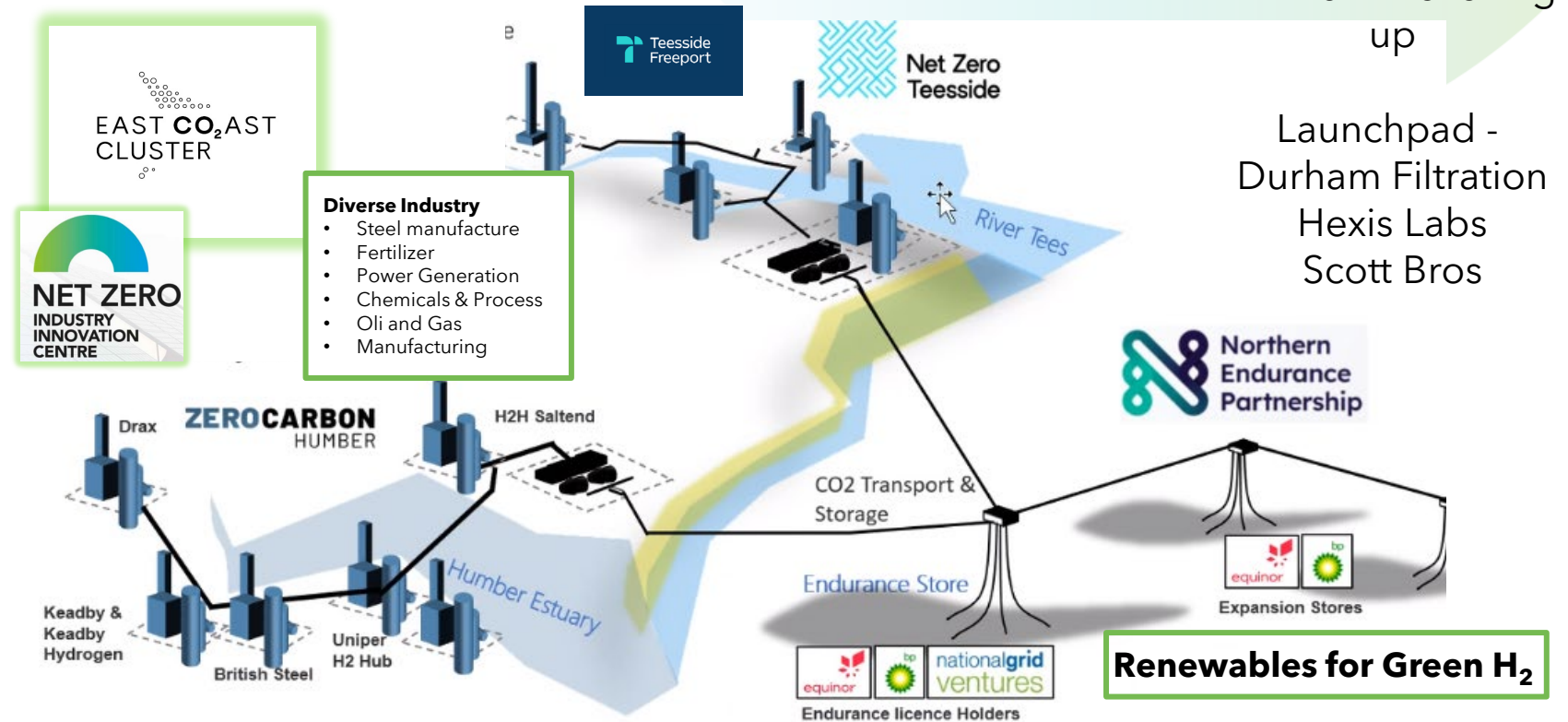
Home to the **world's first industrial-scale carbon capture and storage project**.



KMPG estimate that exploiting the opportunities could add up to **£7 billion to the region's economy** and create up to **1,000 high value-added jobs**.

NZICC is at the Heart of the East Coast Cluster: UK's 2-For-1 Decarbonisation

- Two geographical industrial regions combining as one cluster.
- Nearly 50% of the UK's industrial emissions.
- Supporting jobs, skills and levelling-up across the North of England.
- 50% of all H₂ in UK
- Extensive geo-storage available (NEP).
- 9 of the 20 originally shortlisted projects are in the Tees Valley



Net Zero Teesside
£2.2 bn - Levelling
up

Launchpad -
Durham Filtration
Hexis Labs
Scott Bros

Attracting investment

We are at the heart of the East Coast Cluster, which will be responsible for reducing 50% of the UK's industrial emissions.



**Bespoke
research
projects
for the
region and
beyond.**

Industries we work with



AVGO Biotech

Every year, tens of millions tonnes of precious natural resources are used for the creation of calcium carbonate. AVGO Biotech aim to divert **15,000 tonnes** of eggshells away from landfill, creating a **fully circular recycling process**. The NZIIC is working with AVGO Biotech to investigate novel methods of eggshell separation which will help create not only a **pharmaceutical grade calcium carbonate**, but also **reduce 60,000 tonnes of carbon dioxide** being emitted annually.



MConnected

Mconnected are an **IoT company** working with **Forestry England** to map the **carbon capture** potential of Peatland. Using **novel satellite-based** technology they seek to deploy sensors across the peatland to develop trends and collect data sets to help understand the area.



Chestnut Bio

Our Circular Economy lab has **materials characteristic equipment** which allowed Chestnut Bio to test out the resistance and reliability of different formulations of their product, in addition to providing **industry standard testing** of new formulas and materials. NZIIC and Chestnut Bio have successfully created a **new sugar-based polymer blend** which can be used for not only tree guards but a **variety of different products** such as rabbit guards, vole guards, deer guards, weed mats, cable ties and trimmer cord.



We bring your business' net zero ambitions to life **through innovative research projects** and **fully-equipped laboratories**.

Thank you for your time!



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