

1 July 2020

Plan for world-leading clean hydrogen plant in the UK

Equinor is leading a project to develop one of the UK's – and the world's – first at-scale facilities to produce hydrogen from natural gas in combination with carbon capture and storage (CCS). The project, called Hydrogen to Humber Saltend (H2H Saltend), provides the beginnings of a decarbonised industrial cluster in the Humber region, the UK's largest by emissions.

H2H Saltend supports the UK government's aim to establish at least one low carbon industrial cluster by 2030 and the world's first net zero cluster by 2040. It also paves the way for the vision set out by the Zero Carbon Humber alliance, which Equinor and its partners launched in 2019.

The project will be located at Saltend Chemicals Park near the city of Hull and its initial phase comprises a 600 megawatt auto thermal reformer (ATR) with carbon capture, the largest plant of its kind in the world, to convert natural gas to hydrogen. It will enable industrial customers in the Park to fully switch over to hydrogen, and the power plant in the Park to move to a 30% hydrogen to natural gas blend. As a result, emissions from Saltend Chemicals Park will reduce by nearly 900,000 tonnes of CO₂ per year.

In its later phases, H2H Saltend can expand to serve other industrial users in the Park and across the Humber, which employs 55,000 people in the manufacturing sector alone, contributing to the cluster reaching net zero by 2040. This will enable a large-scale hydrogen network, open to both blue hydrogen (produced from natural gas with CCS) and green hydrogen (produced from electrolysis of water using renewable power), as well as a network for transporting and storing captured CO₂ emissions. It is estimated that fuel switching to hydrogen could create 43,000 new job opportunities in energy-intensive industrial sectors across the UK.

"The world continues to need more energy at lower emissions so we can achieve the ambitions of the Paris Agreement. This necessitates a substantial decarbonisation of industry, in which we believe carbon capture & storage and hydrogen can and must play a significant role. With private and public investment and supportive UK policy, the H2H Saltend project will demonstrate the potential of these technologies. Together we can make the Humber and the UK a world-leading example that others can learn from," says Irene Rummelhoff, executive vice president for marketing, midstream and processing at Equinor.

"px Group is delighted to be supporting H2H Saltend, a landmark project for UK energy transition. We are fully committed to helping industry reach net zero and both CCS and hydrogen will play a huge part in that. We're looking forward to collaborating with all the project partners as we work towards this common goal," says Geoff Holmes, chief executive officer of px Group, which owns and operates the Saltend Chemicals Park.

"As the UK's leading supplier of energy, we're proud of the role our natural gas and offshore wind has played in reducing carbon emissions in power. Now we want to go further by bringing hydrogen to the Humber region. With our partners, we plan to transform the UK's largest industrial cluster into its greenest cluster," says Al Cook, executive vice president and Equinor's UK country manager.

H2H Saltend will be part of the Zero Carbon Humber alliance's application for public co-funding in the second phase of the Industrial Strategy Challenge Fund, which launched on 23 June 2020. Subject to supportive UK policy, Equinor and its partners will mature the project towards a final investment decision during 2023 with potential first production by 2026.

In 2018 Equinor, Northern Gas Networks and Cadent, published the H21 North of England report showing how blue hydrogen could be produced and supplied to millions of homes and business across the north of England. Equinor is also a partner in the Net Zero Teesside development which proposes to build a new-build gas-fired power station with carbon capture, and extending the CCS infrastructure to the neighbouring industrial cluster.

In May, Equinor and its partners took a final investment decision on Northern Lights, Europe's first commercial-scale carbon transportation & storage project off the coast of Norway. If the Norwegian government makes a positive final investment decision in 2020, the first phase is expected to be operational by 2024.

For more information contact:

██████████

██████████@equinor.com

██████████

Fact Box

- More information on the H2H Saltend project can be found at www.h2hsaltend.co.uk and in the project brochure.
- Saltend Chemicals Park, which comprises chemicals plants and Triton Power's Combined Cycle Gas Turbine (CCGT) power station, currently emits around 3.5 million tonnes of CO2 per year. Following the initial phase of the project, emissions are projected to fall to 2.6 million tonnes.
- Carbon dioxide emissions will be captured and transported east by pipeline to offshore underground storage in the Endurance aquifer, located in the Southern North Sea.
- The ATRs are expected to produce hydrogen at 80% efficiency with a minimum carbon capture efficiency of 95%.
- Equinor believes the large-scale hydrogen value chain in the area around Saltend could have capacity for up to 3 gigawatts (3,000 megawatts) of blue and green hydrogen.
- H2H Saltend is part of the vision set out by the [Zero Carbon Humber alliance](#) that includes a large-scale hydrogen demonstrator by the mid-2020s, carbon negative power from a bioenergy carbon capture and storage (BECCS) pilot project at the Drax Power Station, and developing a hydrogen economy in the Humber region, Yorkshire and the North of England.
- As H2H Saltend expands, it is expected to help Saltend Chemicals Park reach net zero carbon emissions by 2035 and the wider Humber region reach net zero by 2040.
- Equinor is working with its partners in both the Humber and Teesside projects to develop a common CCS transport infrastructure to storage on the UK Continental Shelf, reducing costs and risk for both projects.
- Equinor is also part of the [UK Hydrogen Strategy Now campaign](#) for a UK-wide hydrogen strategy to unlock significant private investment in hydrogen technologies and manufacturing across the country, driving growth and creating green jobs.

About Equinor in the UK

Equinor has been operating in the UK for over 35 years. Headquartered in Norway, the company employs 22,000 people globally, and over 650 in the UK. As a broad energy company, Equinor is committed to long term value creation in a low carbon future, and targeting carbon neutral operations globally by 2030.

Equinor is the UK's leading energy provider and supports the UK economy by investing billions in crucial energy infrastructure, working with over 700 suppliers across the country. Its energy supplies from Norway meet more than one quarter of the UK's demand for natural gas and around one fifth of its demand for oil, both produced with one of the lowest carbon footprints in the industry. It operates the Mariner oil field, one of

the largest and most digitally advanced offshore investments in the UK over the last decade, and is progressing Rosebank, the largest undeveloped field in the UK. Both projects support hundreds of jobs and economic activity in Scotland.

Equinor also operates two offshore wind farms off the East Coast of England, Dudgeon and Sheringham Shoal. It is a pioneer in floating wind technology with Hywind Scotland, the world's first floating wind farm off the coast of Peterhead, which is partnered with Batwind, the world's first battery for offshore wind. And with its partner SSE Renewables, Equinor is building the largest offshore wind farm in the world, Dogger Bank, off the North East coast of England. It is also a leader in both carbon capture utilisation and storage (CCUS) and hydrogen, and is developing a number of projects in Europe, including in the Humber and Teesside regions of North East England.