

# Uniper and Shell's Humber hydrogen plan moves forward with contract awards

Three companies have been awarded contracts to design a hydrogen production and carbon capture plant for Uniper and Shell on the South Humber Bank.

Air Liquide Engineering & Construction, Shell Catalysts & Technologies and Technip Energies will compete to deliver the Humber H2ub proposal, and take it to the front-end engineering and design phase and potentially through to operation.

The step will be welcomed by industry, coming almost three months after [Uniper was nationalised by the German government](#) as a stabilisation measure over the energy crisis caused by the Russian invasion of Ukraine. At the time, while it said there were no plans to sell, no update was given on the investment proposals at Killingholme Power Station, [first revealed in April](#).

**Read more:** [Humber carbon capture power station given go-ahead in UK first for Net Zero technology](#)

Humber H2ub forms part of Uniper's Energy Transformation Hub Killingholme, with plans for a separate green hydrogen project – using renewable energy as a feedstock – also progressing.

This phase would see low carbon fuel produced using gas reformation, with 720 megawatts eyed – enough to heat half a million homes. Use will be industry-focused though, with the Humber's process and power plants switching while transport is another route. Around 1.6 million tonnes of carbon would also be captured annually, with Uniper part of the Zero Carbon Humber proposal.

Guy Phillips, Uniper's senior business development manager for hydrogen, said: "The award of process design package contracts represents a significant step towards our plans for low-carbon hydrogen production at Killingholme. This will help to decarbonise the UK's largest CO2 emitting industrial region. Hydrogen will be one of the solutions to achieve the UK's target of becoming carbon neutral by 2050, and the Humber region and this project will contribute to achieving it."

A final investment decision is anticipated in the mid-2020s. It is one of several hydrogen production projects being brought forward as part of a £15 billion decarbonisation drive on the Energy Estuary – currently one of the worst polluting regions in Europe.



An outline of Shell and Uniper's hydrogen production proposal on the Humber.

(Image: Shell / Uniper)

Paul Black, Shell's business development manager for upstream, integrated gas and new energies, said: "It's never been more important to explore new ways to use the UK's natural gas together with carbon capture technology. And we are making

strong progress with Uniper to do this. We aim to build hydrogen production to boost the country's long-term energy security and decarbonise heavy industry, transport and power in the Humber region. This forms part of Shell's broader intent to build a global leading hydrogen business, which has included work starting in 2022 to build Europe's largest renewable hydrogen plant in the Netherlands."

The three companies were chosen through a formal selection process which began last year. Seven contractors were asked to propose solutions for a final bid, with costs, preliminary designs and bid concepts submitted. On the Humber Air Liquide and Technip are both involved with Velocys' sustainable aviation fuel projects – [given a major funding boost this week](#) – with Shell Catalysts working on both [Phillips 66](#) and [VPI Immingham](#)'s Humber Zero carbon capture plans, the latter also with Technip. Technip is also part of the [design competition for H2H Saltend](#) – one of the first to emerge.

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