H2Teesside

Statutory Consultation – Questions and Answers

We've created this document to answer some of the most commonly asked questions about H2Teesside.

If you have any questions that are not answered, you can contact our project team by email at info@h2teesside.net or by phone on 0800 0803028.

What is H2Teesside?
H2Teesside is a proposed large-scale blue hydrogen production facility in the Tees Valley. It aims to be one of the largest blue hydrogen production facilities in the UK. The development is targeting up to 1.2 Gigawatt (GW) of hydrogen production across the two phases of development.

What is blue hydrogen?
Blue hydrogen, or CCUS-enabled hydrogen, is hydrogen that is extracted from natural gas, but the vast majority of CO2 produced during this process is captured and stored permanently.

Green hydrogen, commonly defined as electrolytic low carbon hydrogen, is made by water electrolysis using renewable and low-carbon electrical power sources such as solar and wind.

Electrolysis is the process by which an electric current is passed through a substance to effect a chemical change. In this case, splitting water molecules (H2O) into hydrogen (H2) and oxygen (O2).

Why is blue hydrogen needed? Can't you produce green hydrogen instead?
In the UK Hydrogen Strategy (published August 2021), the UK Government set out an approach to support green hydrogen and blue hydrogen in parallel, aiming to enable the rapid growth of the sector while bringing costs down.

Producing green hydrogen relies on the availability of a sufficient, reliable supply of low carbon electricity, produced via methods such as wind and solar power. The current scale at which renewable and low carbon energy is produced presents significant challenges to producing green hydrogen at an industrial scale, in the timescales in which it is required.

Blue hydrogen is being promoted as a necessary and low cost option, which can make use of existing infrastructure across the Teesside region, advancing the UK's energy transition.

Who will use the hydrogen produced at H2Teesside?
We're seeing strong interest from potential industrial users (known as offtakers) for hydrogen from H2Teesside to help decarbonise industry. H2Teesside can supply a diverse range of customers, those already established in Teesside as well as new businesses attracted to this low carbon hydrogen produced at scale.

Where will the carbon be stored?
The CO_2 captured by H2Teesside will be sent for secure long-term storage to the Endurance store, located approximately 145 km off the coast of Teesside under the North Sea, via the Northern Endurance Partnership pipeline.

The Northern Endurance Partnership (NEP) is the CO_2 compression, transportation and storage project which will deliver the onshore and offshore infrastructure needed to capture carbon from a range of emitters across Teesside and the Humber and transport it to the Endurance store. The Endurance carbon store is the name of a geological feature – a saline aquifer – under the North Sea. It has the capacity to store 450 million tonnes of CO_2.

How safe is the use of hydrogen?
Safety is bp's number one priority and as part of our project proposals we have developed a Design Hazard Management Plan. This plan identifies, confirms and assesses the hazards related to the project, and ensures that there are processes in place to manage these hazards appropriately, during the operation of H2Teesside.

bp has been operating hydrogen production plants within our refineries for many decades. It will use its years of experience to ensure that H2Teesside is operated strictly in line with its operating management system, to ensure that there is zero harm to people and the environment.

What is the planning process for the project? Who will make the ultimate decision on whether H2Teesside should go ahead?
The Secretary of State for Energy Security and Net Zero has directed that H2Teesside is a project of national significance which should be consented through a type of planning consent called a Development Consent Order (DCO).

We need to make an application for a DCO to the Planning Inspectorate who are responsible for administering the application process on behalf of the Secretary of State, who is ultimately responsible for deciding whether development consent should be granted.

What will you do with my feedback?
Once the consultation closes on 26 October 2023, we'll review all feedback and have regard to it in finalising the design of H2Teesside and our DCO application.

We'll set out a summary of the responses and set out how your feedback has helped shape our proposals in a Consultation Report which will be submitted as part of our DCO application.