



Offshore wind offers a clean way to produce hydrogen | Photo source [Mitchell Orr on Unsplash](#)

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AN ISLAND DEDICATED TO GREEN HYDROGEN

 AGRICULTURE & ENERGY

A project proposed for the Dogger Bank in the North Sea would produce hydrogen using wind power

Spotted: Hydrogen fuel cell technology is beginning to ramp up, but there is still a big problem – most of the world’s hydrogen is produced using fossil fuels. And for hydrogen to fulfill its promise as a versatile source of clean energy, it needs to be produced using renewable energy in a process called electrolysis. This is the focus of Copenhagen Infrastructure Partners (CIP), a company that is proposing the construction of a ‘first of a kind’ artificial island in the North Sea dedicated to the large-scale production of green hydrogen using wind power.

The proposed ‘Hydrogen Island’ (BrintØ in Danish) would be built in the Danish section of the Dogger Bank – a large sandbank in the middle of the North Sea. The area offers excellent conditions for green-energy production, due to its shallow waters and strong and consistent winds. The island will deliver around one million tonnes of hydrogen each year, using electrolyzers powered by up to 10 gigawatts of offshore wind.

In addition, the Dogger Bank’s location in shared UK, Dutch, German, and Danish waters makes it ideally situated for the export of hydrogen. CIP partner Thomas Dalsgaard [explains](#) that, “Green energy will be harvested on a large scale out at sea, tied together by energy islands, converted into green hydrogen, and transported across borders via offshore hydrogen infrastructure.”

In addition to the Hydrogen Island plans, there are also plans for constructing hydrogen plants using offshore wind around the German island of Heligoland and in Dutch waters. “The Danish, German, Dutch, and Belgian ambitions for the North Sea show the rest of the world how the green transition

can be turbocharged if you dare to think big, internationally and in integrated systems,” says Dalsgaard.

Although hydrogen has potential, the infrastructure needed to support its use must be further developed. Projects like Hydrogen Island aim to correct that. Springwise has spotted other green hydrogen innovations, including a project in the far south of Chile that produces [hydrogen for synthetic fuel using wind power](#), and a [new method for creating hydrogen from banana peel](#).

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Takeaway:

Hydrogen is already widely used in some industries, but it has not yet realised its potential to support the transition to clean energy. While hydrogen fuel-cell vehicles have garnered some attention, hydrogen’s greatest potential is likely lies in storing energy from other renewables in order to help with variable output. Large amounts of hydrogen could be produced using wind or solar, then stored and used as a power source. Hydrogen is ideal for this as it can be stored for long periods, transported via pipelines or ships, and transformed into electricity and methane to power homes, factories, and vehicles.