

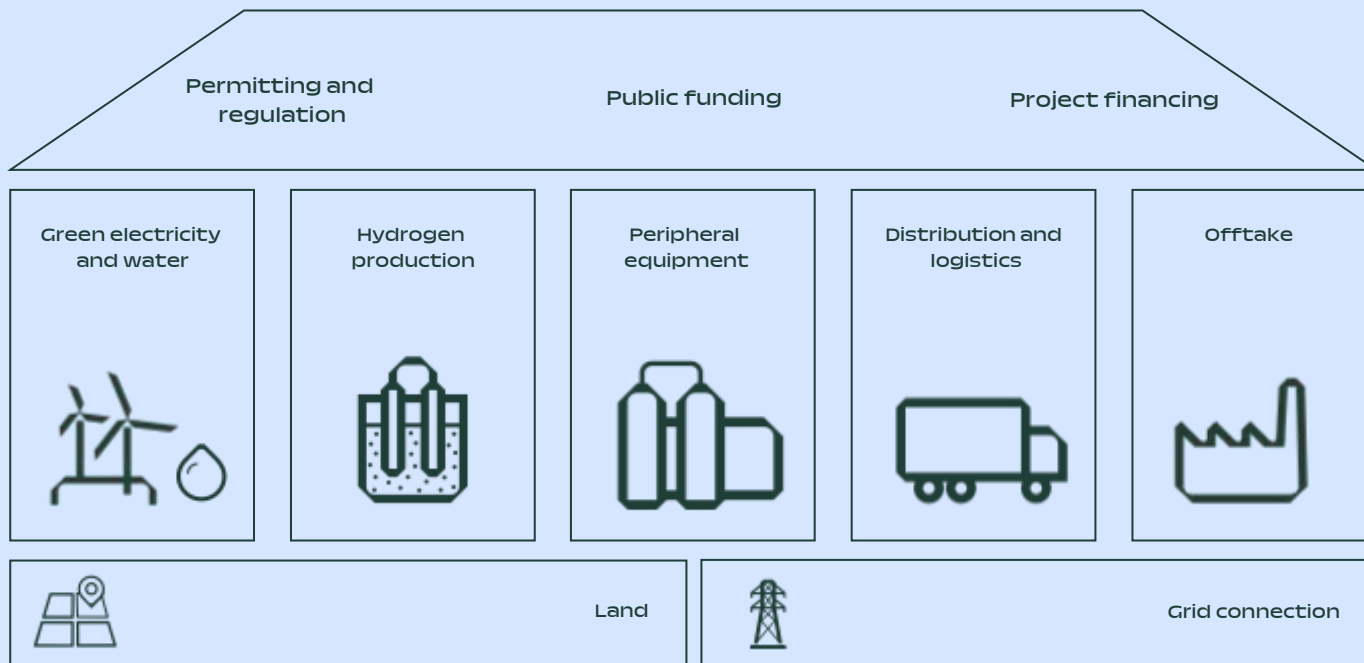
MorGen Energy

Hydrogen Cymru 2025

Sam French, Chief Technology Officer

Hydrogen project value chain

Integrated approach – the availability of renewable energy and offtake define the project's viability



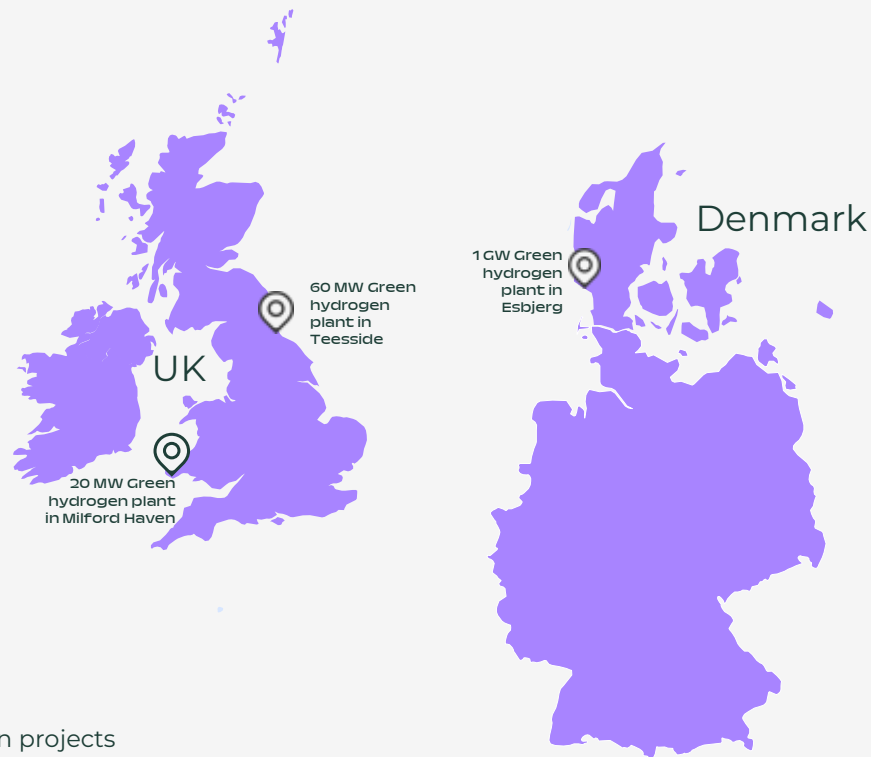
Driving the European energy transition

>1.6 mmt

CO2 avoidance per annum
across our projects by 2030

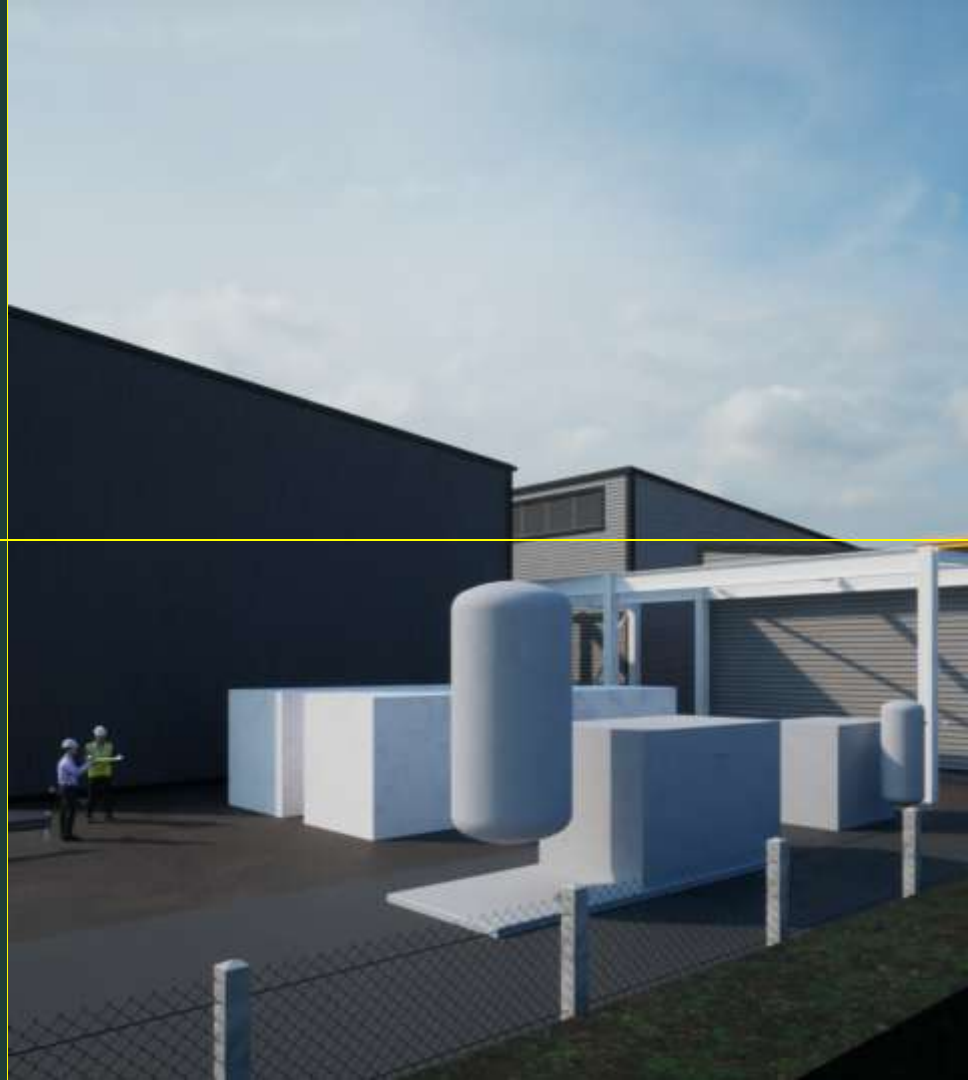
143k tonnes

Renewable hydrogen expected
to be produced per annum
across our projects by 2030



West Wales

Production facility





Project description

West Wales Hydrogen - UK

Location

Milford Haven, Wales (site of the former Elf Refinery)

20MWe

Hydrogen plant

1,865

Tonnes of green hydrogen p.a.

Compliant with UK's Low Carbon Hydrogen Standard

15,000

Tonnes CO2 avoidance p.a.

PEM electrolyser technology

FEED validation complete, detailed engineering commenced

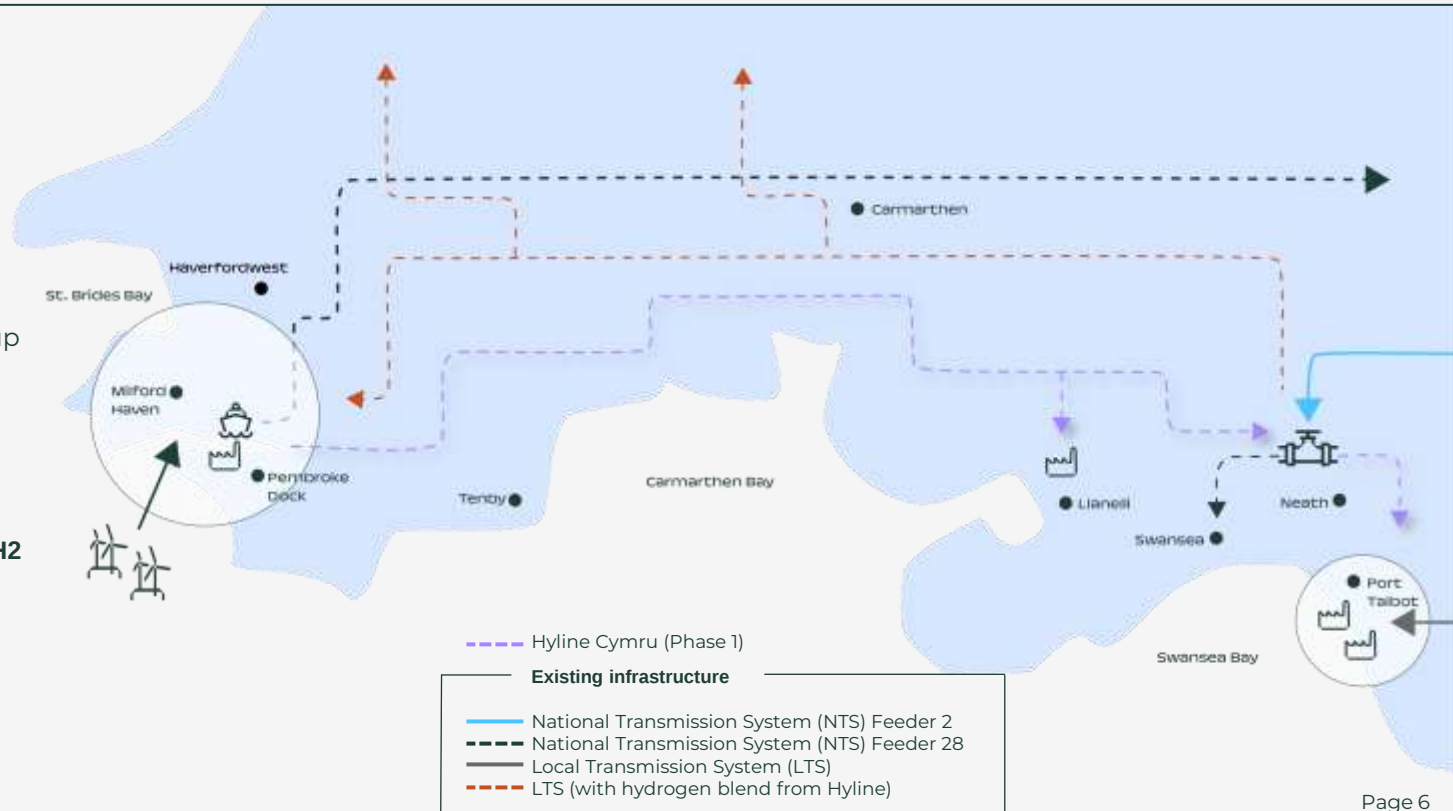
Start of production planned for H1 2027



Developing the South Wales H2 cluster

MorGen has the vision to further expand production and continue building H2 ecosystems

- Supported by new-build **H2 pipeline HyLine Cymru** planned by Wales & West Utilities.
- Pipeline market study shows potential annual **demand up to 200kt**.
- Off-takers are interested in starting with pilots and scale up when pipeline is ready.
- Potential scaling of our production capacity.
- Distribution will be done via containers in phase one until **H2 pipeline HyLine Cymru** is built.
- The announcement of **£500M** for Transport and Storage is timely although details yet to be announced.



Teesside

Production facility





Project description

Teesside Green Hydrogen - UK

Location

Teesside, Northeast England

60MWe

Hydrogen plant

6,000

Tonnes of green hydrogen p.a.

Compliant with UK's Low Carbon Hydrogen Standard

45,000

Tonnes CO2 avoidance p.a.

PEM electrolyser technology

Start of production planned for 2029

The project has been shortlisted under Hydrogen Allocation Round 2.



Njordkraft

Production facility



Project description

Njordkraft Hydrogen - Denmark

Location

Esbjerg, Denmark

1 GW

Hydrogen plant

135,000

Tonnes of green hydrogen per year

1.1 million

CO2 avoidance (tonnes p.a.)

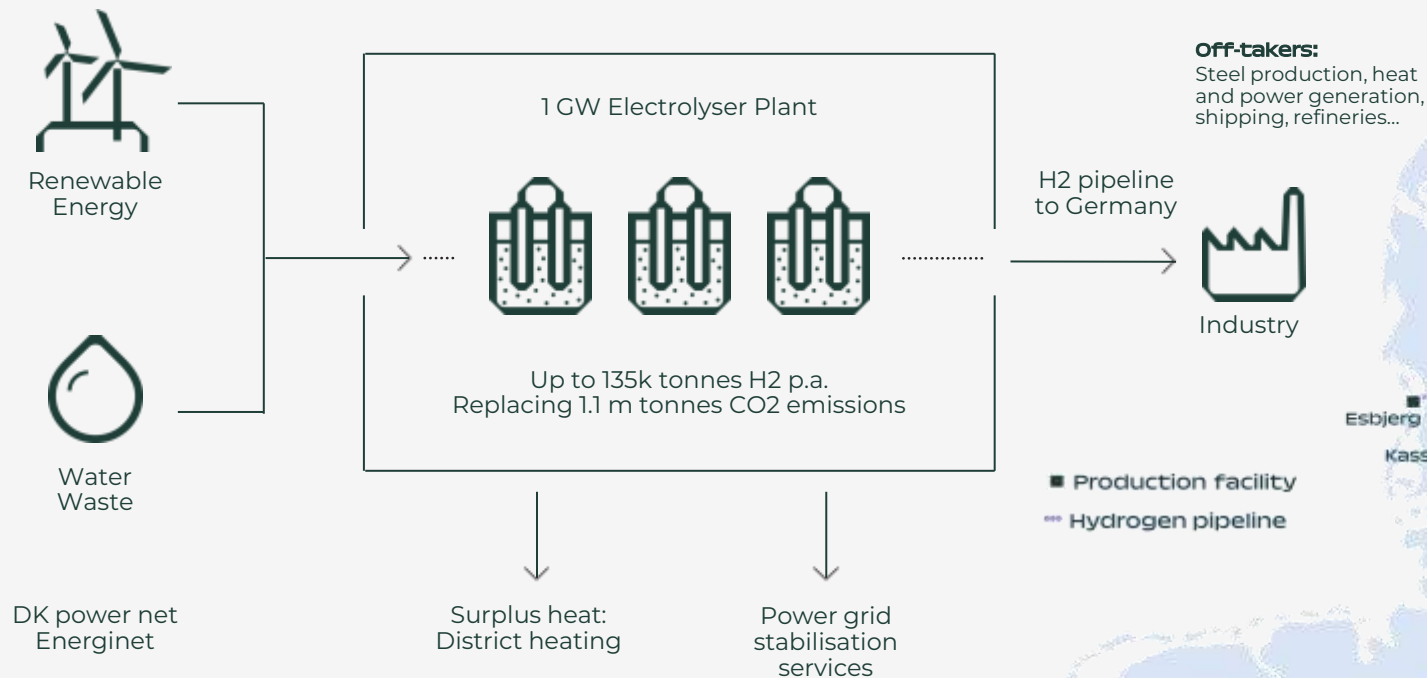
Electrolyser technology TBC

- Successfully passed all key permitting and approval stages
- Initial design and engineering plans are complete
- Progressing through the financing and procurement phases
- Grid connection secured
- Agreement with supplier of clear wastewater
- Integration with surplus heat in combination with cooling solution
- Construction to take three years after FID



PtX – a significant enabler of offshore wind to land

Decarbonising energy intensive industries and heavy transportation and storing energy



What is needed to unlock the hydrogen economy?

Incentives: Near-term financial support to de-risk first movers aimed at overcoming the operational and commercial barriers that make hydrogen adoption risky **for industrial offtakers.**

Mandates: Clear robust carbon pricing, quota obligations, or penalties for non-compliance with decarbonisation mandates.

Scale is what changes the game. Only **large-scale, integrated projects**, those combining production, transport and offtake across regions will unlock cost reductions and shift hydrogen from niche to mainstream.

At its core, unlocking the hydrogen economy requires two things: **incentives strong enough to create movement today**, and **consequences clear enough to drive permanent change tomorrow**



Ready, set, green?

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