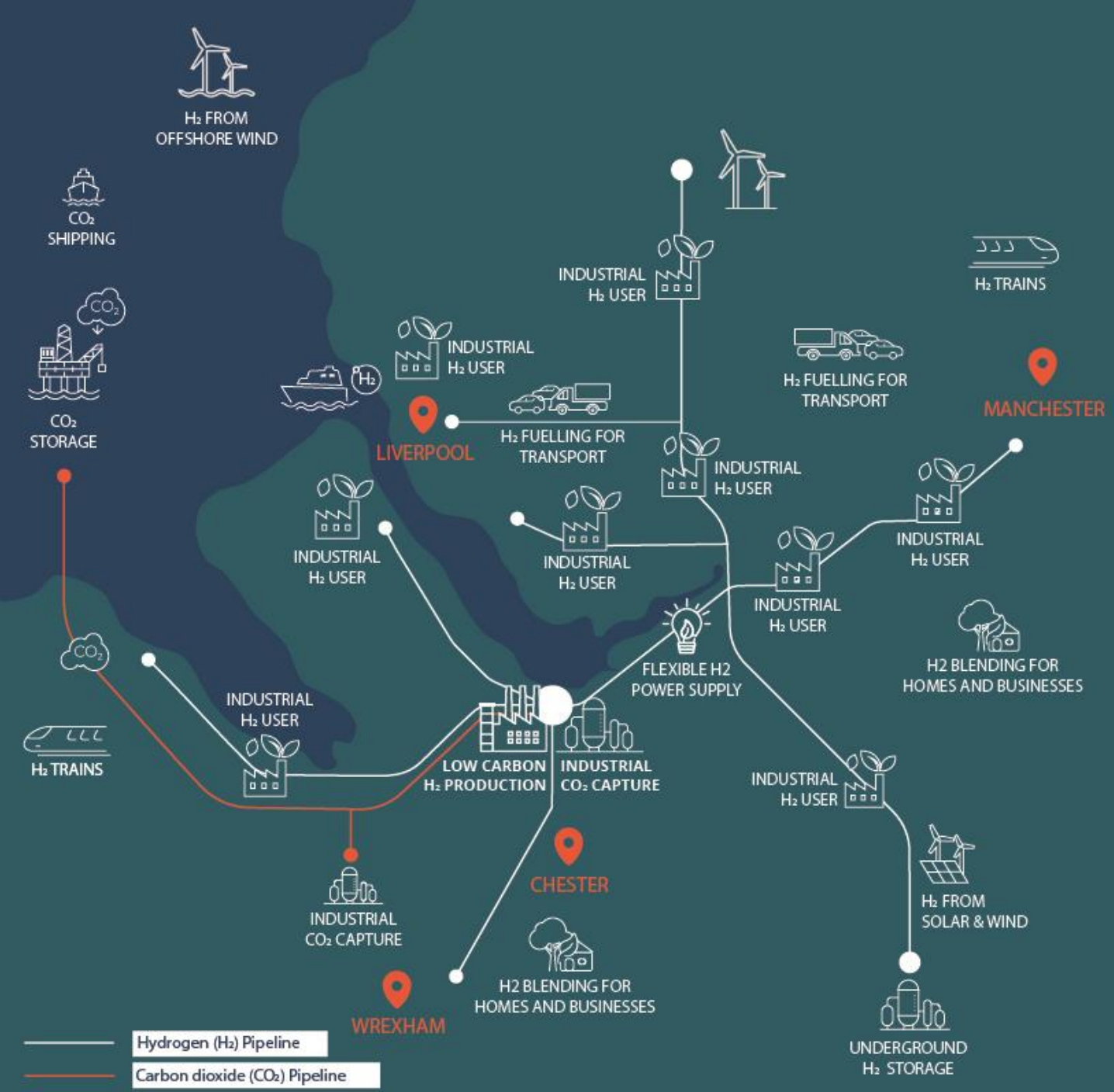


HyNet North West

CCSA Webinar

July 2021





Elements of HyNet North West

As part of the HyNet North West project, we will build:

- Low-carbon hydrogen production plants
- A hydrogen pipeline network and salt caverns in which hydrogen can be stored ready for use
- Facilities to capture CO₂ emissions
- Underground pipelines to transport CO₂ emissions to permanent safe storage

HyNet: Delivers against the Ten Point Plan

- Hydrogen Production Target: 1GW by 2025, 5GW by 2030. HyNet delivers:
 - 4GW of demand intent from 23 major industrial companies plus network blending
 - Fully integrated production, distribution and storage to meet demand
 - Industrial fuel switching large scale trials
 - 'HyNet Homes' – hydrogen village / town
- CCS Capacity Target: 10MTPA by 2030. HyNet delivers:
 - 11MTPA of demand intent from 12 major industrial companies
 - Progressive, no-regrets expansion of CCS capacity to meet demand



HyNet: Committed consortium

HyNet is a collaboration of separate, integrated organisations that have joined together to decarbonise the North West and North Wales region.

Each partner is led by industry experts working collaboratively across the network of hydrogen production, distribution, usage and storage as well as carbon capture and storage.



HyNet: Wider benefits

- Transforms North Wales and the North West by building on the region's rich industrial heritage to provide a lasting legacy for generations to come.
- Benefits at the local, regional and national level.
- Taps into the area's industrial experience and scientific expertise to create a hotspot for innovation and growth.

Levelling Up:
protecting
businesses who
want to act now;
creating 6,000 local
permanent jobs

Green Growth:
£17 billion
economic impact
in the NW and
North Wales

Emissions:
Reducing the
region's carbon
emissions by a
quarter over 5
years

Global Leadership:
Creating the UK's first net
zero industrial cluster -
establishing the region as
a world leader in clean
energy innovation; creating
an attractive place in which
to operate and invest.

HyNet: Momentum and deliverability

- Project design and consenting: fully funded (£33m BEIS/UKRI + £39m private)
- Leading hydrogen production: using UK Johnson Matthey LCH™ technology
 - FEED completed
- Advanced consenting and permitting activity:
 - CO₂ storage licence secured, CO₂ pipeline DCO in public consultation
 - Hydrogen production plant planning permission process underway
 - Hydrogen salt cavern storage – only requires a variation to existing DCO consent
- Blue chip companies readying for hydrogen: Fuel switching trials – Summer 2021



HyNet: Momentum and deliverability

→ Recent announcements:

- Progressive Energy and Essar form JV for 1GW of hydrogen production – Jan '21
- Hanson joins HyNet to become UK's first low carbon – Feb '21
- Viridor joins HyNet en route to becoming UK's first net-negative waste company – May '21
- Intergen joins HyNet to create a low carbon power station at Rocksavage – Jun '21
- Encirc joins HyNet to decarbonise container glass manufacture at Ince – Jul '21



HyNet: Key messages

Materiality

- 100% of CCS target
- 80% of H₂ target
- 50% of regional natural gas use displaced
- 25% of regional emissions abated

Deliverability

- Operational from 2025
- Storage licence awarded
- H₂ production FEED completed
- Fully integrated H₂ value chain
- Demand led

Value for Money

- Well-characterised storage reduces risk
- Infrastructure re-use reduces cost by ca.50%
- Low cost capture from industrial sources
- Optimised H₂ production

Benefits

- Attracts new investment (e.g. Viridor / Fulcrum / ABSL)
- Delivers 6000 jobs
- Provides infrastructure for LCR / GMCA / CWaC to deliver Net Zero targets



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