

HyNet North West

**Blueprint for
Delivering a
Regional Hydrogen
Cluster**

8 February 2023



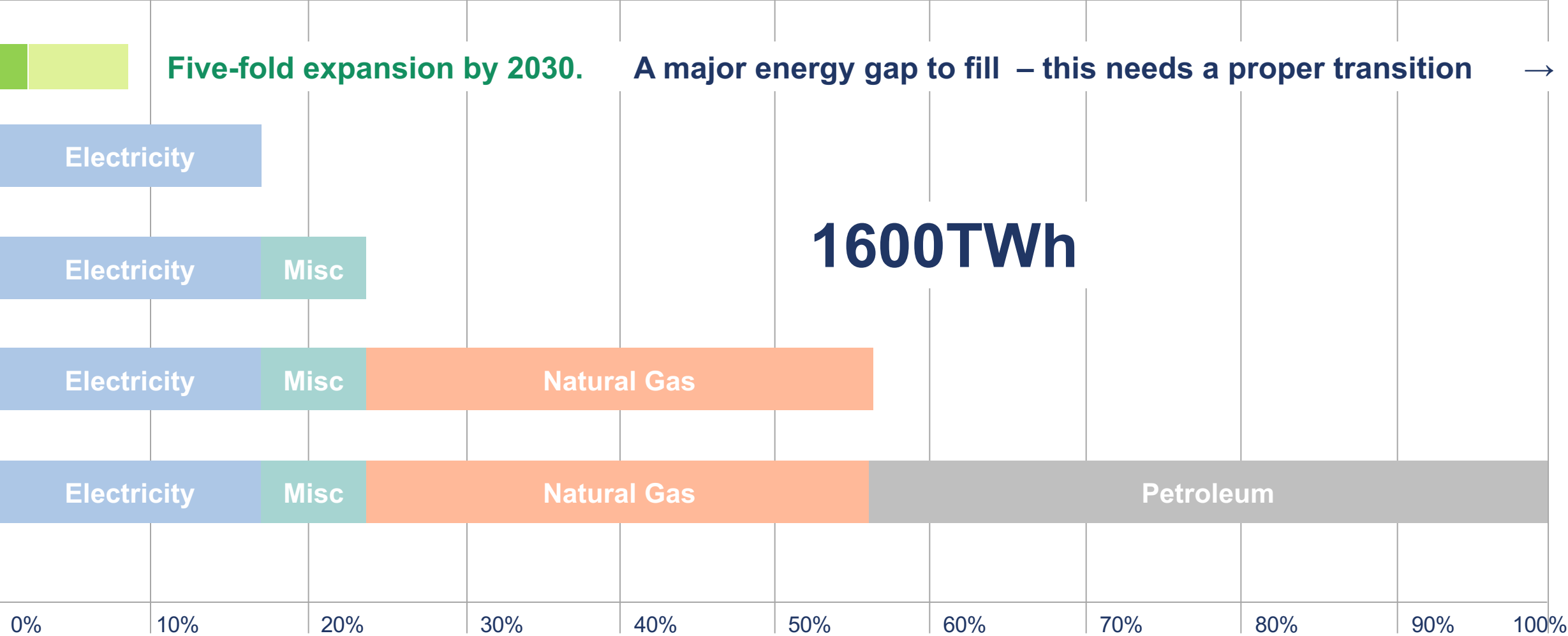


**Why
Hydroge
n**

**HyNet
blueprint**

**Unlockin
g
delivery**

Anchoring Energy –UK Demand



Why Hydrogen

- Abating 500 mtpa CO₂ is a vital but massive challenge & opportunity
- Electricity and the electricity network cannot do it alone – we need:



Drop-in

Storage

Resilience

- All types of low carbon hydrogen will have a part to play
 - **CCUS enabled** hydrogen will deliver millions of tonnes of abatement rapidly, and underpin our hydrogen infrastructure build out today
 - **Electrolytic hydrogen** should start now, and will dominate by 2050
 - Other forms such as **Biohydrogen** have an interesting future role.

HyNet North West

- UK's leading industrial decarbonisation cluster
- Selected by Government: Track 1 project
- From 2026, HyNet will:
 - produce, store and distribute low carbon hydrogen
 - capture and lock up carbon dioxide emissions from industry.
- New and reuse of pre-existing infrastructure

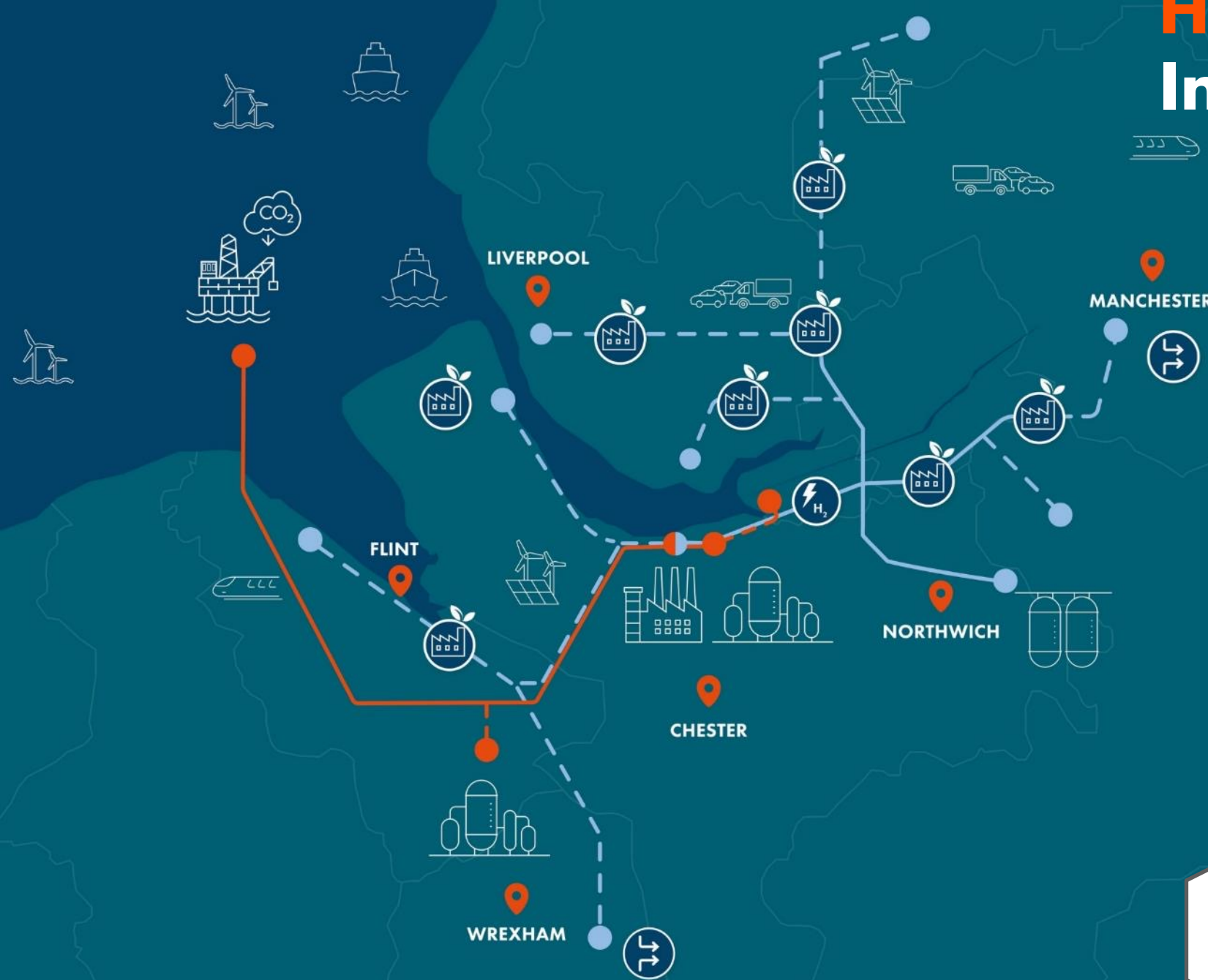


Demand led

Unlocking new low-carbon growth opportunities for the automotive, chemical, shipping, glass, food, material, and energy sectors



HyNet Infrastructure



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



Delivering Economic Growth

- Save guarding industry and jobs
- Driving inward investment
- World leading blueprint for decarbonisation
- By 2030, HyNet will enable
 - 55,000 UK jobs
 - >£5Billion of capital investment
- By 2050, HyNet could generate up to £31 billion GVA for the UK

MISSION ZERO



Independent Review of Net Zero

Rt Hon Chris Skidmore MP

“Net zero is a driver of economic growth”

“....the global net zero transition could be worth over £1 trillion to UK businesses between 2021 & 2030.”

HyNet: Hydrogen production at Scale



VERTEXHYDROGEN

- Vertex Hydrogen formed to deliver **1GW** of low carbon hydrogen at Stanlow
- Most advanced hydrogen project in the UK
- Unlocks wider low carbon hydrogen production

HyNet North West

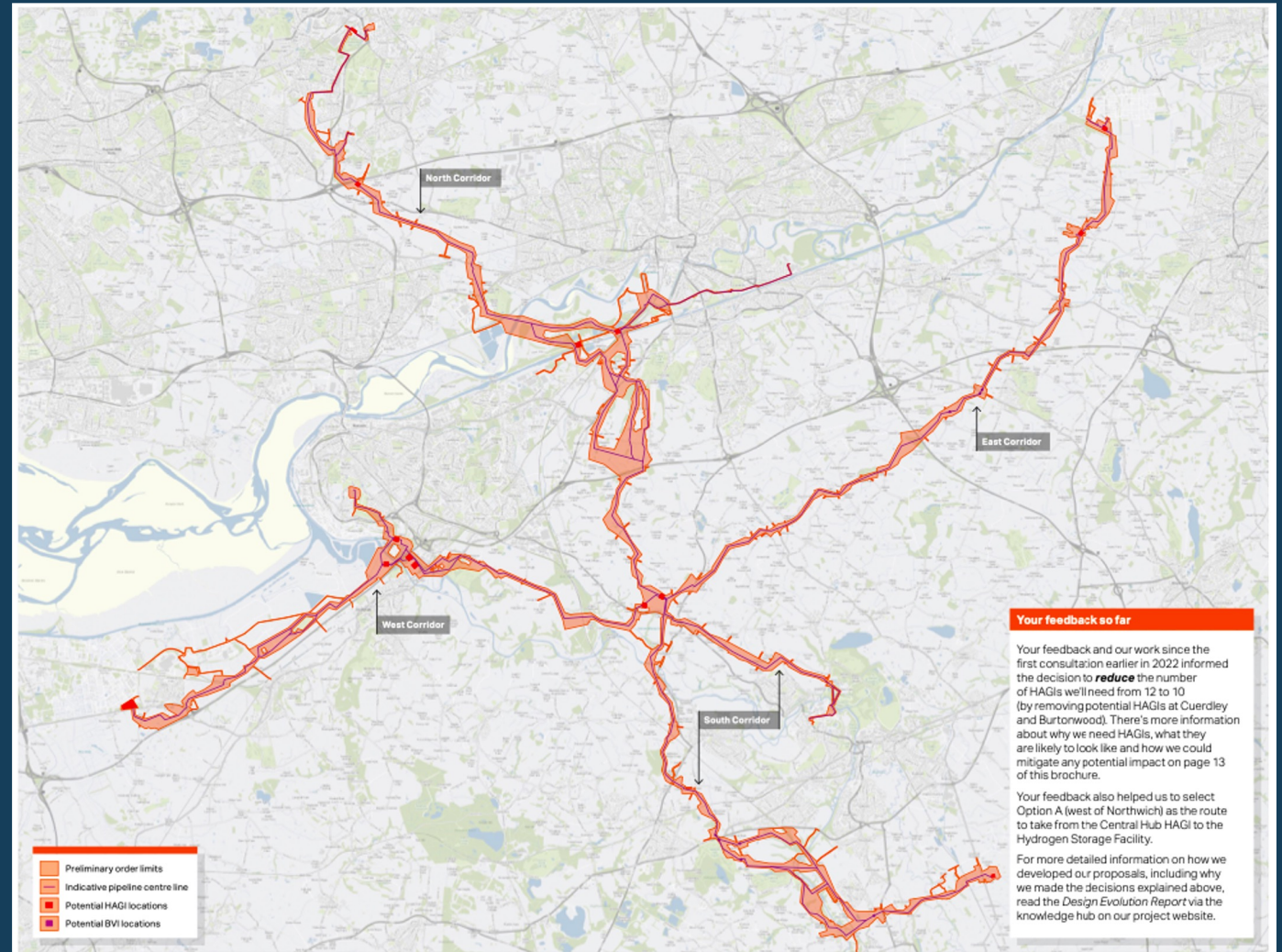
HyNet: Hydrogen Distribution

Cadent

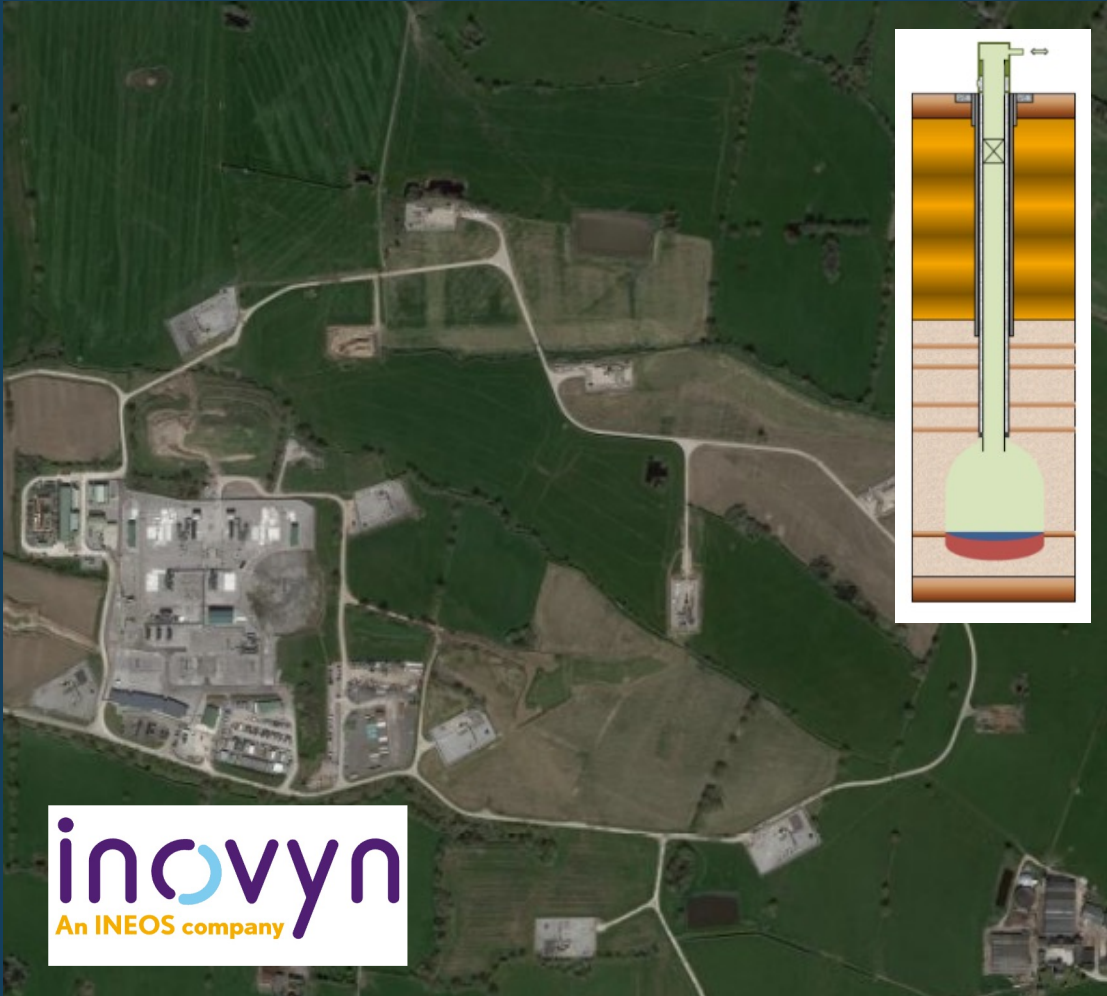
Your Gas Network

- 120km of dedicated hydrogen pipeline
- Designed for expansion over wider geography to distribute over 30TWh of hydrogen (4GW)
- FEED & DCO Consent underway
- Awaiting government business model

HyNet North West



HyNet: Hydrogen Storage



- Capable of storing 1300GWh of energy
- **150x bigger** than Dinorwig, UK's largest pumped storage facility
- Most advanced H₂ store in the UK: Finalising FEED engineering and consenting
- Awaiting government business model

Electrolytic Hydrogen Production

- HyNet unlocks wider regional hydrogen production
- Progressive Energy, Statkraft and Foresight developing a suite of green hydrogen projects
 - Initial phase of 100MW of projects will reduce emissions from industry by up to 180,000 tonnes.
 - Includes proposed 28 MW Cheshire Green Hydrogen project which will use renewable electricity from Frodsham wind farm.



HyNet: Making it Happen



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**Making it
Happen**