# HyNet

Chester Development Update June 2024

## HyNet infrastructure



Underground pipeline network to transport CO<sub>2</sub> emissions to permanent storage



Facilities to capture  $CO_2$  emissions



Underground storage for hydrogen to be stored ready for use



Underground pipeline network to transport hydrogen from production to storage and use



Low-carbon hydrogen production plants





### **Meet the partners**

Unlocking low-carbon growth opportunities for multiple sectors including:





Energy from waste and generation





### By 2030 HyNet will unlock

- **55,000** UK jobs
- 42,000 Regional jobs
- £5.4 billion Capital investment
- £110 million GVA each year

## **Delivering Growth**

- Building on the region's rich industrial heritage to provide a lasting legacy for generations to come.
- Tapping into industrial experience and scientific expertise.
- Leading the UK's hydrogen and CCS economy – creating a hotspot for innovation and growth to encourage inward investment.
- Improving local air quality to make the region a safer and healthier place.

## Carbon dioxide pipeline



- Carbon dioxide Transportation & Storage developed by Eni
- New pipeline between Elton and Flint
- Re-use of existing natural gas pipeline between Flint and Point of Ayr
- Development Consent Order for main pipeline granted by Secretary of State
- Applications for spur pipeline connections underway





Manchester Ship Canal

ERF under constru

Sub Stations

Proposed Carbo

Capture EscilityEscility

Timber Plan

Ecological Management Area A

- Protos ERF is currently under construction
- 49MW energy from waste
- Target CO<sub>2</sub> reduction: 380k tonnes/year

## HyNet

## Viridor

- Viridor Energy from Waste plant, Runcorn
- One of the UK's largest EfW plants
- Target CO<sub>2</sub> reduction: 900k tonnes/year

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- Project completion: end 2026
- Anticipated investment: £300 400 million



- Heidelberg cement plant in North Wales
- Target CO<sub>2</sub> reduction: 800k tonnes/year
- Project completion: end 2027
- Anticipated investment: over £275 million
- Spend on during construction: £300 million

#### ESSAR ENERGY TRANSITION



### Hydrogen production plant

- Vertex Hydrogen (now EETH) formed to deliver 1GW of low carbon hydrogen at Stanlow
- Most advanced hydrogen system in development in the UK including production, distribution and storage
- Environmental Permit approved May 2023
- Planning consent approved January 2024



## Hydrogen distribution and storage



- Pipeline developed by Cadent
- FEED engineering complete
- DCO application Q1 2024
- Storage developed by Inovyn in salt caverns near Middlewich
- Capacity to store 1,300 GWh of hydrogen
- Total UK electricity storage is ~30GWh



## On track for final investment decision



#### 2ND APRIL 2024 | 2 MINS

Viridor's Runcorn CCS Project to Advance to Next Stage



#### Lord Callanan visits Padeswood to learn about our plans to create the UK's first net zero cement works

Press Release 25

25 March 2024



Today we are announcing a major leap forward in our industry-leading plan to develop the UK's first energy-from-waste facility with carbon c ...see more

...





BUSINESS DEVELOPMENTS & PROJECTS EET Hydrogen, UK Government enter final talks on Ellesmere hydrogen plant

3 months ago

## Positioning for expansion

- HyNet Track 1 Expansion process will allow additional carbon dioxide capture projects to connect to HyNet
- Attracting retrofit carbon capture to existing sites plus new build projects
- Demonstrates opportunity to drive inwards investment to the region



"The UK's climate goals will only be achieved with genuine ambition to decarbonise British industry in this decade.

"The opportunity is to cut carbon, while growing regional employment."

Chris Stark, CEO of the Climate Change Committee



### HyNet: hydrogen - Industrial Fuel Switching

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- Hydrogen demonstrations complete at:  $\rightarrow$ 
  - NSG Pilkington Glass Greengate Works  $\rightarrow$
  - Unilever Port Sunlight  $\rightarrow$
- Hydrogen CHP FEED complete at:  $\rightarrow$ 
  - → Essar Stanlow Manufacturing Complex
- → Feasibility studies at:
  - Kellogg's  $\rightarrow$
  - PepsiCo
  - Novelis  $\rightarrow$
  - Essity  $\rightarrow$

**HyNet** 

**KraftHeinz** 

