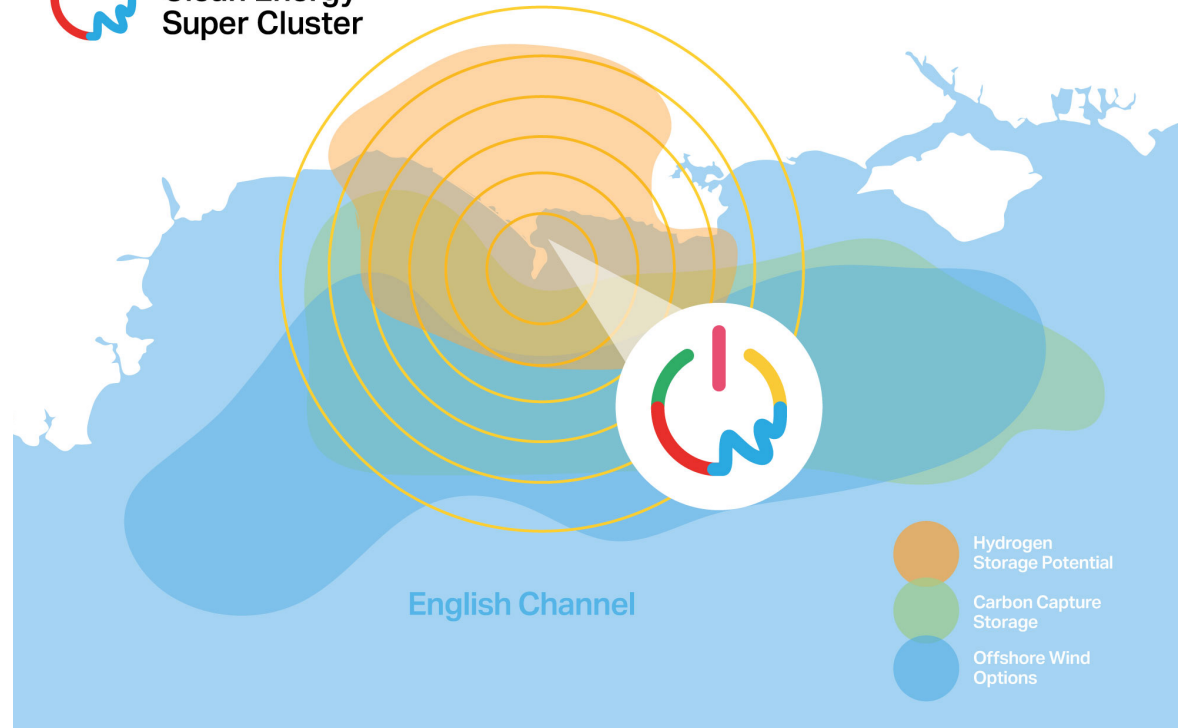
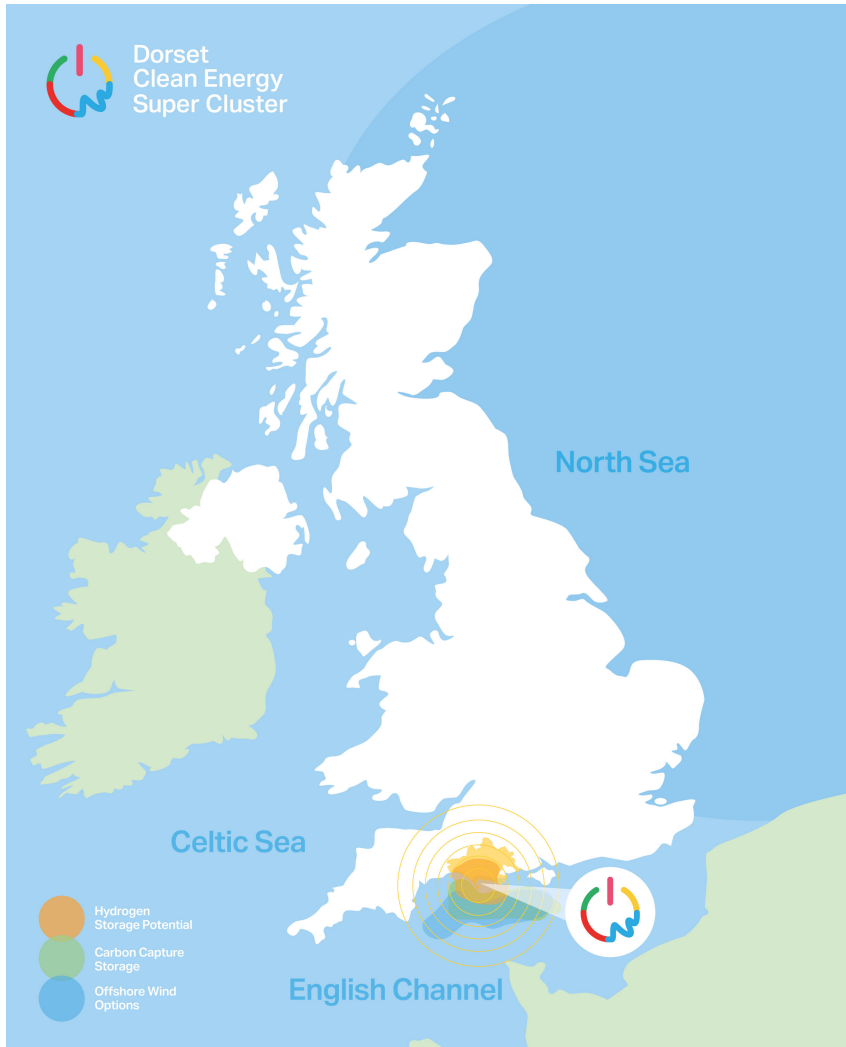


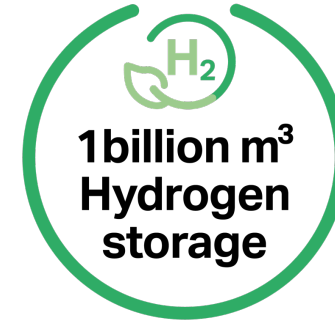
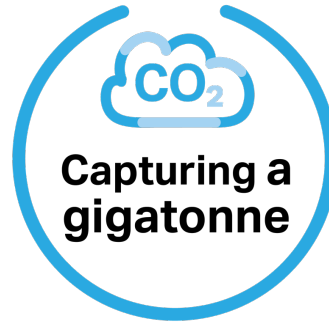


**Dorset
Clean Energy
Super Cluster**

Energising Dorset

- Dorset is a new destination for international investment to advance and deliver UK Modern Industrial Strategy and help achieve ambitions for the UK to be a clean energy superpower and accelerate progress towards net zero : The Missions of Growth and Clean Power.
- The Dorset proposition is to be a positive agent in energy transition and energy resilience and to expedite clean power and bolster UK opportunities in supply chain development.
- With its unique geology and geography Dorset can harness its natural and historic advantages to pivot to respond to new challenges and secure opportunities for its communities.
- Dorset has a timely opportunity to rebalance its approach to progressive forms of development to sustain its future







Dorset
Clean Energy
Super Cluster

Transition Opportunity



Introducing...

Portland Port: Construction Headquarters, accommodation, transport services – “the biggest little port in the world”

Portwind: Source Galileo are proposing 2GW’s of offshore wind (deep fixed) in the English Channel

Channel Gateway: Proposed by Morwind, as a deepwater, offshore wind hub up to 60 ha to enable manufacturing, assembly and servicing of offshore wind sector in the English Channel

Carbon Capture and Storage: Dorset can play its part in locking away a gigatonne of CO₂ to reduce pace of global warming

Hydrogen Storage and Production by UKEn: National Scale hydrogen storage and production: an enabler for alleviating the inherent intermittency of renewables, enabling dispatchable power to switch from natural gas to hydrogen to power (H₂P) and supporting hydrogen demand for SAF and Marine Propulsion directives

New nuclear: SMR deployment at Dorset Innovation Park

Related grid, battery storage improvements, electric infrastructure.

Portland Port



Source Galileo: Portwind

Offshore wind scheme over 20km
from the Dorset Coast

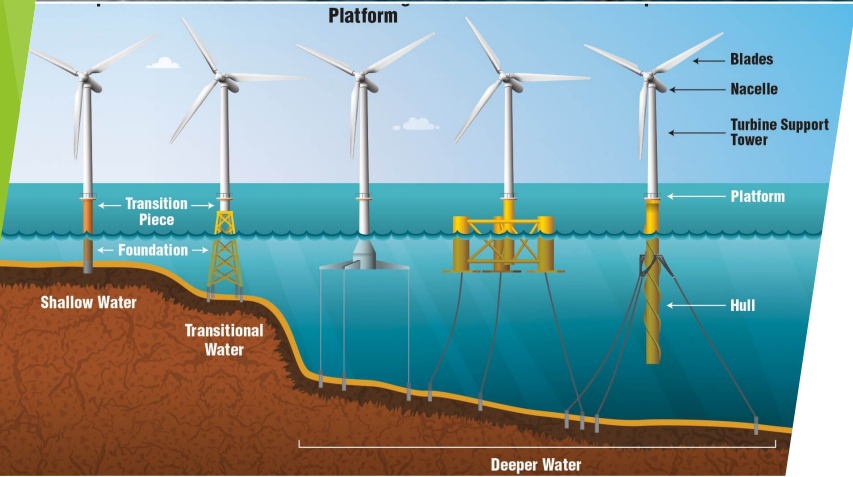
Circa 130 turbines

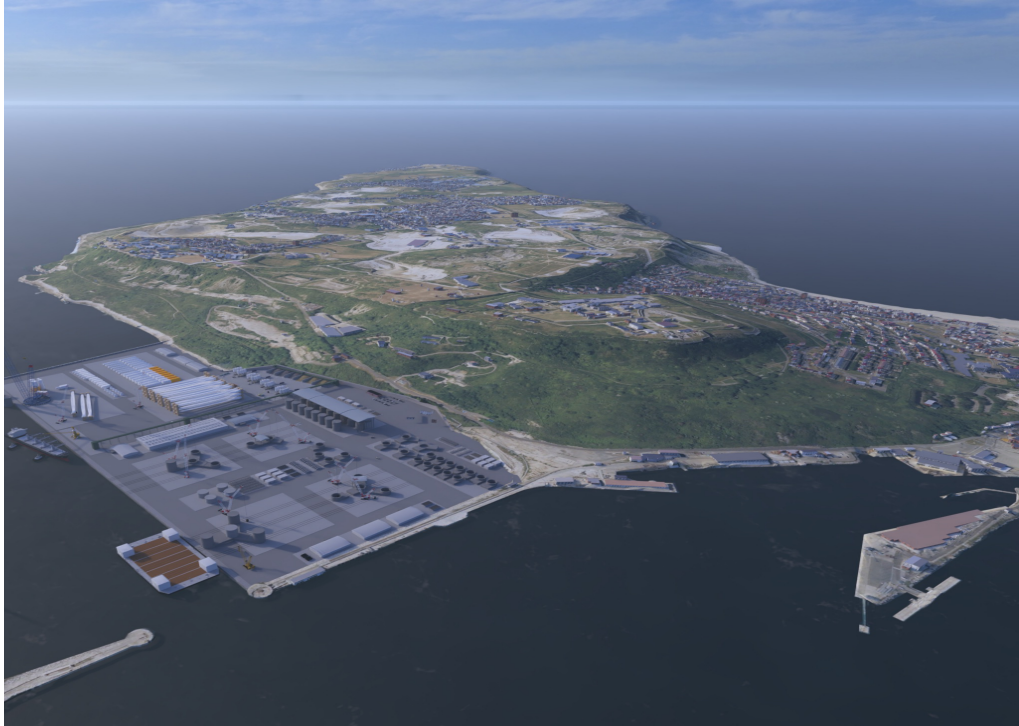
Priorities to onshore power into
Portland, Dorset

Secure onshore construction
roles and long term operational/
maintenance roles

Supply chain location

Export potential



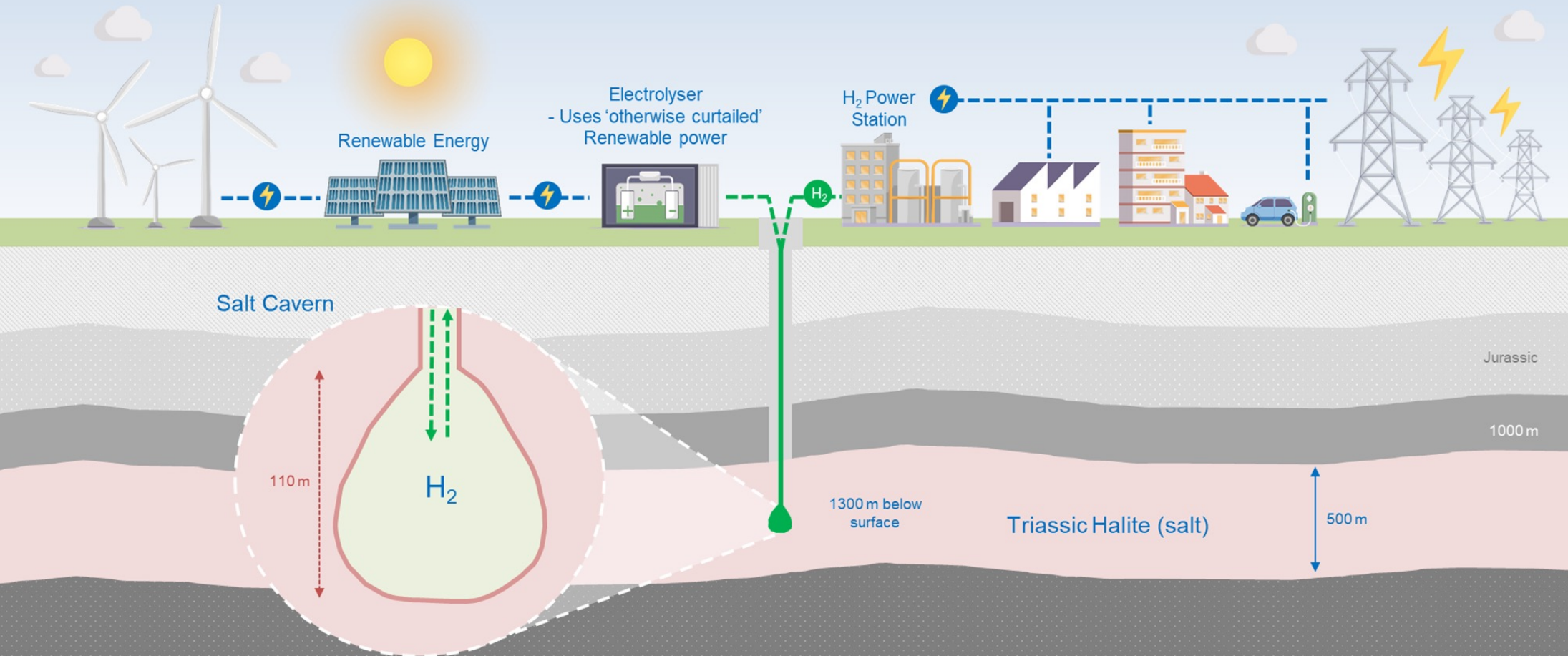


Channel Gateway Wind Port:

The key to
securing long
term benefits

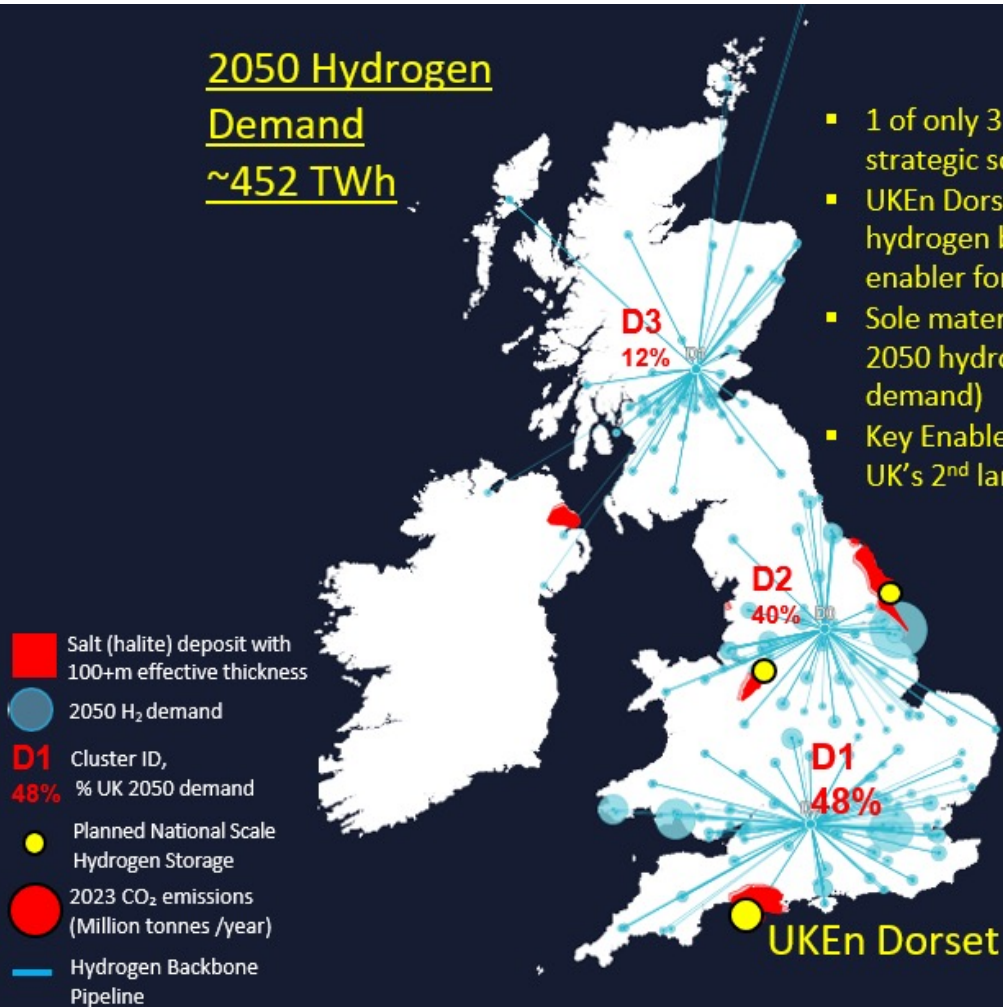
Why Hydrogen Storage & Salt Caverns?

1. Hydrogen Battery: solve renewable intermittency 2. Balance supply & demand 3. Maintain pipeline pressure/fill



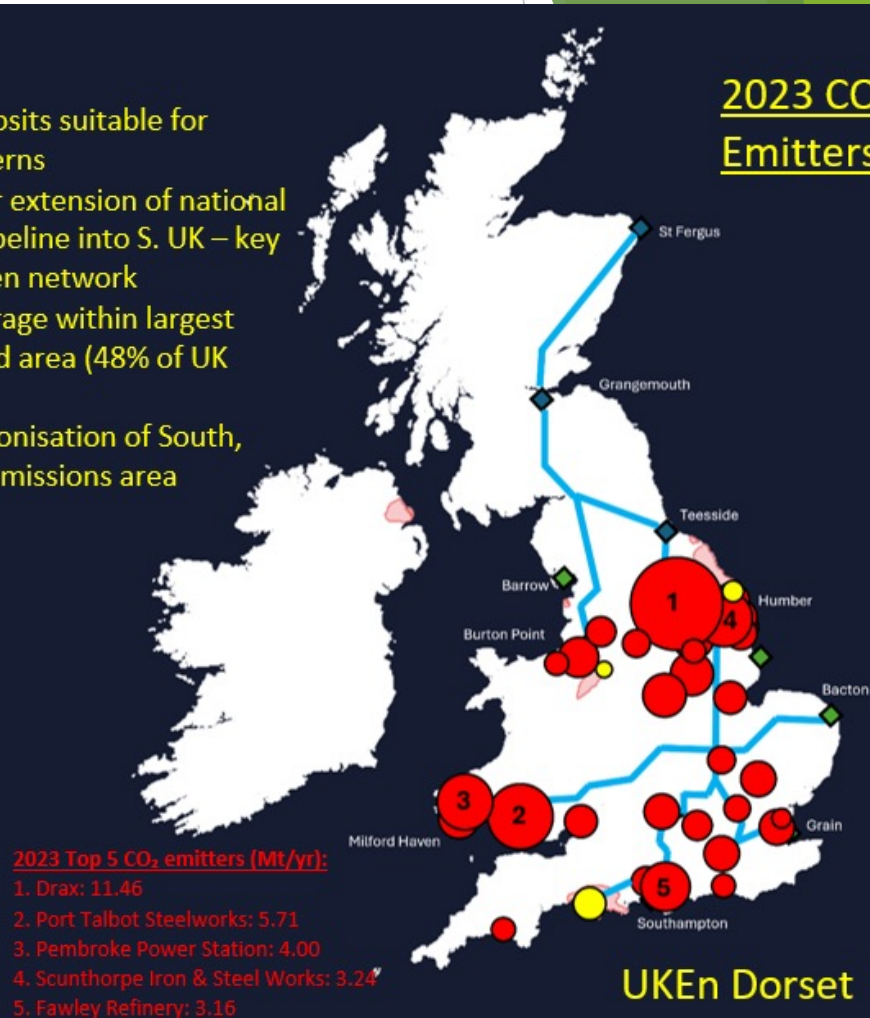
Why Dorset H₂ Storage: Strategic enabler for UK hydrogen

2050 Hydrogen Demand ~452 TWh



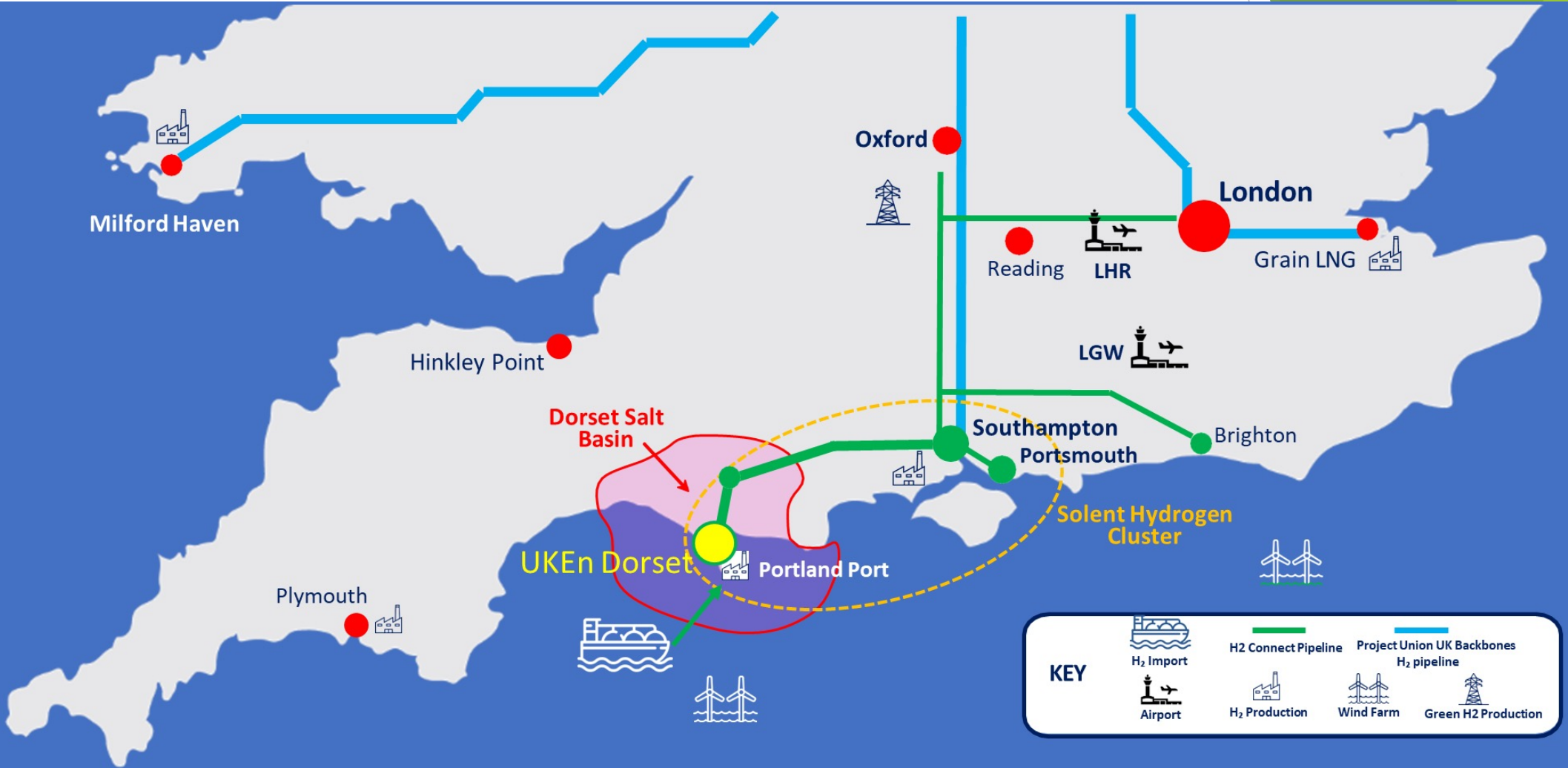
- 1 of only 3 GB salt deposits suitable for strategic scale salt caverns
- UKEn Dorset critical for extension of national hydrogen backbone pipeline into S. UK – key enabler for UK hydrogen network
- Sole material scale storage within largest 2050 hydrogen demand area (48% of UK demand)
- Key Enabler for decarbonisation of South, UK's 2nd largest CO₂e emissions area

2023 CO₂e Emitters



UKEn Dorset

UKEn Dorset: A key element of S. UK H₂ infrastructure



KEY

H ₂ Import	H ₂ Connect Pipeline	Project Union UK Backbones H ₂ pipeline
Airport	H ₂ Production	Wind Farm
		Green H ₂ Production

South Dorset H₂ Storage Facility Benefits



Material Economic Benefits to UK and Dorset Economies

- **£2.28 bn/year GVA during its 30-60 year operational life** (Quod Economic Impact report)
- **Job creation: up to 2,100 direct + 5,100 supply chain jobs, 135 permanent jobs in site operations**

Significant National Scale Contribution to UK Energy Security

- **Store equivalent of 14-27 days of UK electricity supply (i.e., ~4-8% of 2023 annual electricity demand)**
- Supply ~15-31% of high end¹ 2050 UK H₂ storage demand forecasts*
- Supply ~60% of AFRY 2035 UK H₂ storage demand forecast

Key Enabler for UK Hydrogen System and Decarbonisation in UK & Southern England

- **Critical for establishment of UK Backbone Hydrogen Pipeline into Southern UK**
- **Decarbonisation of dispatchable electricity via switch to “H2P” (e.g., Chickerell, Marchwood, Didcot et al)**
- Supports H₂ demand/decarbonisation for
 - Solent Cluster SAF production at Fawley to decarbonise LHR and LGW
 - Southampton and Portsmouth International Maritime Organisation (IMO) 2030 fuel targets
- **Direct synergy/pipeline link with proposed 1GW green H₂ production at Portland Port**

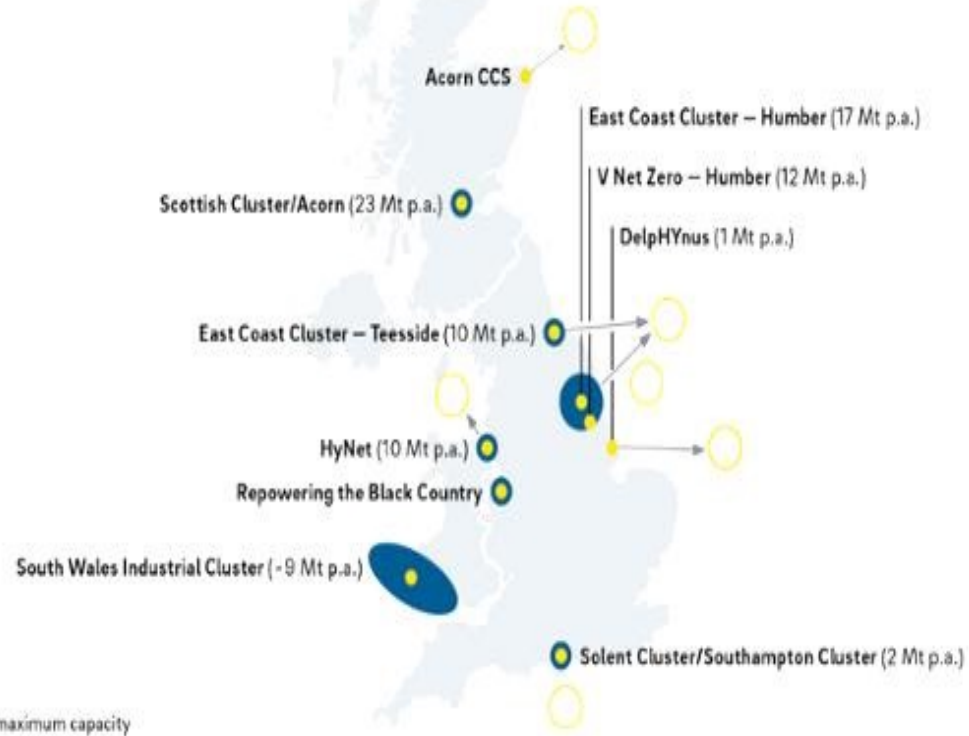
Note: ¹ National Grid 2024 FES STS 49TWh/yr & Royal Soc. 2023 60-100TWh/yr, * Assumes 5 cycles/year (15TWh) from 3TWh (1 bnm³) static storage

THE UK'S LARGEST CLUSTERS BY INDUSTRIAL EMISSIONS ONLY



**The Dorset Carbon Capture
Opportunity: helping to abate carbon
and reduce rate of climate warming**

UK industrial clusters for carbon capture



- Industrial clusters
- Planned carbon capture cluster project and estimated maximum capacity
- CO₂ storage locations

Source Roland Berger

Proposed Timeline

Shape new step change proposition for Dorset:

Dorset Clean Energy Super Cluster to inform Government Modern Industrial Strategy

Nov 2024

Dec 24- Feb 25

March 2025

April 2025

May 2025

Re-position Port as Green Energy Island. Council engagement re SWOT, baseline conditions, opportunities for transformation through NSIPs: Energy Showcase event

Dorset Energy Super Cluster Team attend UK REiif, with GSW launch projects, open up discussions on attracting international finance

Policy development and stakeholder mapping to enable major project delivery- creating the conditions to attract international investment: refreshed Pan Dorset framework, Councils corporate plan, economic plan, local plan

Licencing decisions, Crown Estate results on Round 5 and timeline for Round 6. Final Industrial Strategy, NPPF. Launch of new NPS's, and sub sector strategies. Marketing collateral development.

Questions?

Opportunity for Networking Over Lunch

