



**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



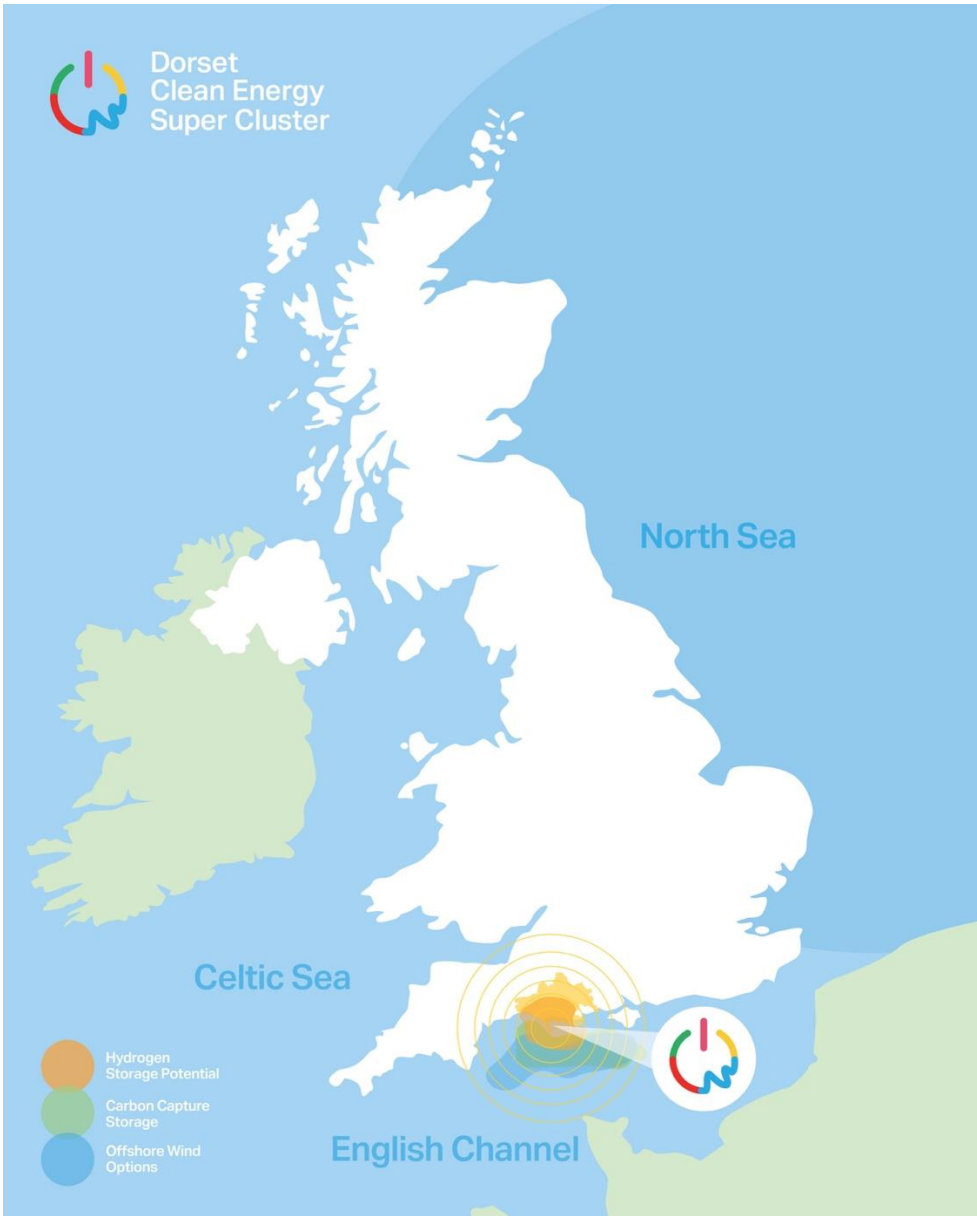
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Transition Opportunity





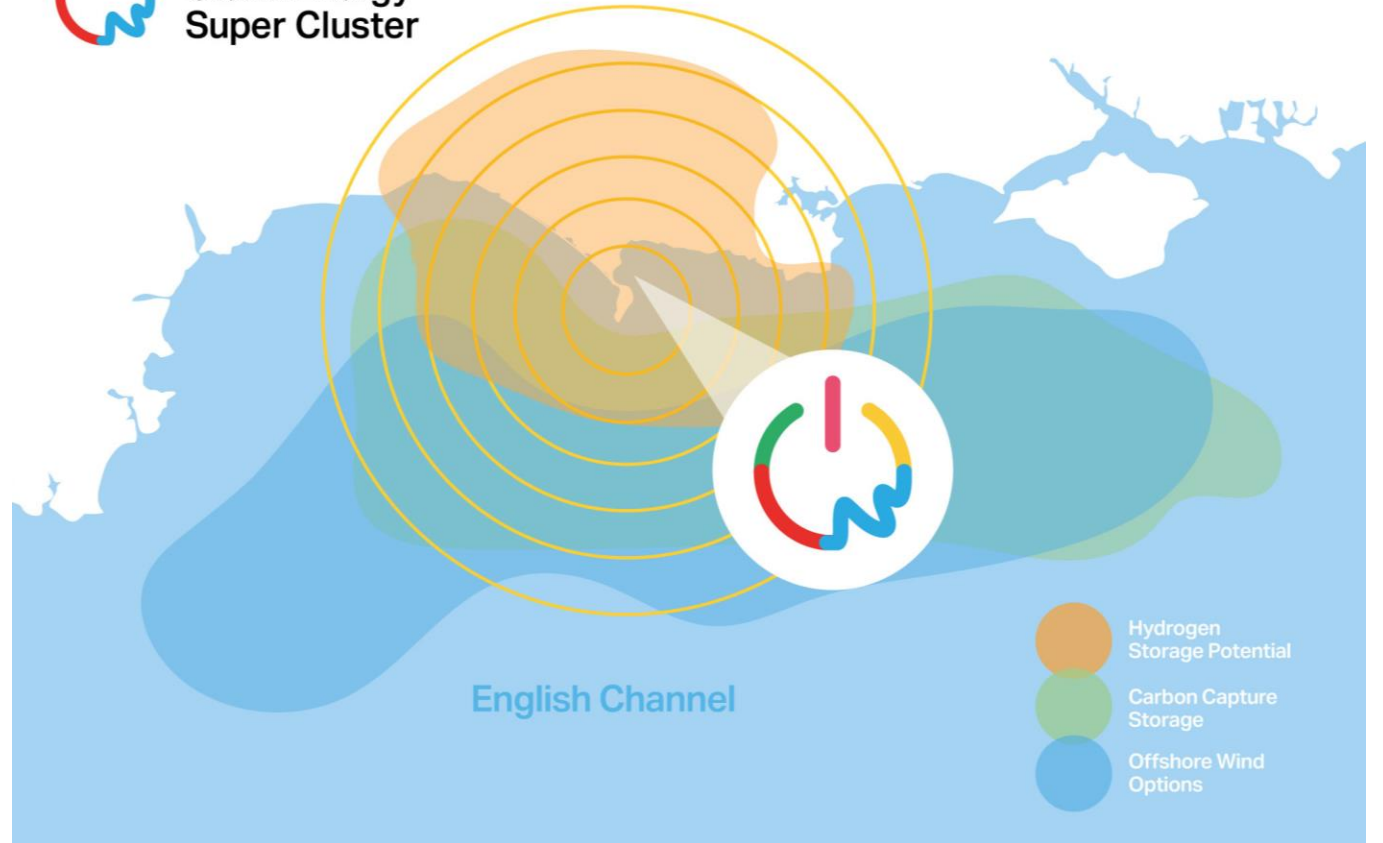
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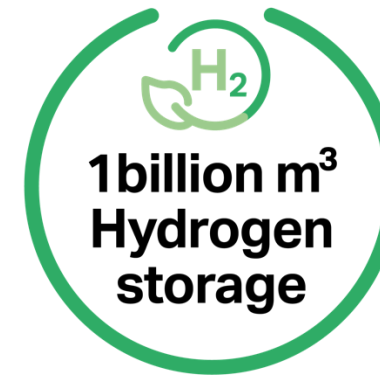
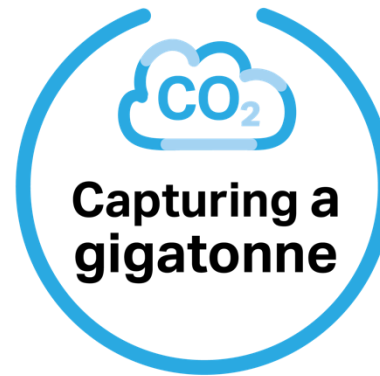


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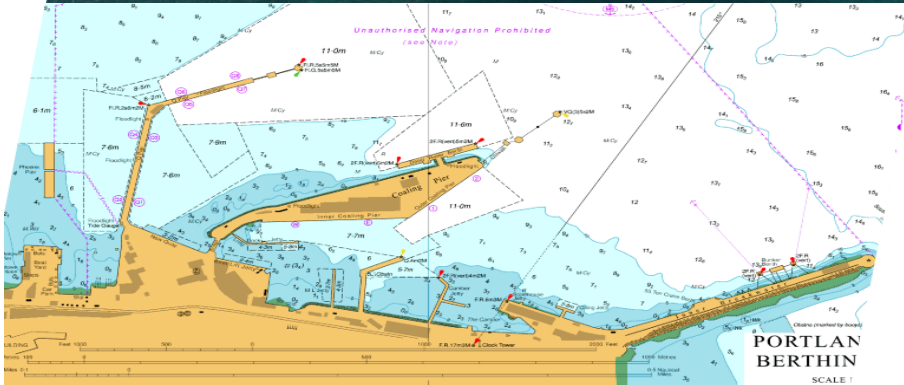
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Introducing...

- **Portland Port:** A perfect location, a unique opportunity. Construction Headquarters, accommodation, transport services
- **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 Import and Storage by UKEn:** One billion m³ of hydrogen storage as alternative clean fuel
- **New nuclear:** SMR deployment at Dorset Innovation Park
- Related grid, battery storage improvements, electric infrastructure

Portland Port



- Central hub for all elements of the Dorset Clean Energy Super Cluster
- Deep, sheltered harbour
- Current availability of appropriate land and buildings
- Extant Harbour Revision Order for further port development
- Within close proximity to potential offshore wind areas in the English Channel
- Well placed to support the development of the Celtic Sea array



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

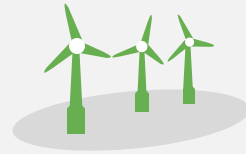
Export potential

Dorset and UK Investment



**£15 billion
investment**

Maximise investment into
Dorset over 30 years



c.2 GW



350 MW



**Up to 3,000
construction jobs**



**Up to 320
operational jobs**



**Up to £332m annual
GVA¹**

Kick starting new
green growth in
Dorset



PortWind Key Project Benefits

Feeding growth and regeneration, contributing to local and national needs



Bring the offshore wind industry to **Dorset**



Create a supply chain for **Dorset's local businesses**



Investing billions of pounds will positively impact **Dorset**



Catalyst for the **Dorset Clean Energy Super Cluster** that includes green hydrogen



Portland infrastructure to support construction and operations



Power supply to enable economic growth



Decarbonising the UK economy



UK **Energy security**



DEVELOPMENT PRINCIPLE



Deep Water Offshore Wind Hub Port

Maximising the benefit of offshore wind for local communities, the South West and the UK, whilst decarbonising the supply chain.

A new 24-hour operational port facility for the UK at Portland, tailor-made to service the offshore wind energy sector for the UK (Round 5, 6, English Channel etc...) and Europe for decades to come.

A nationally strategic port asset which complements existing offshore renewable supply chain strengths, de-risks UK development plans, and offers export potential.

A bespoke, future-proofed, flexible port facility with unique deep water, shelter and unrestricted access.

Channel Gateway will be the only large-scale (700 - 1000m of berth and 40-50ha of manufacturing, marshalling and storage quay), deep water offshore wind port on the South coast of the UK which is deliverable around 2030.



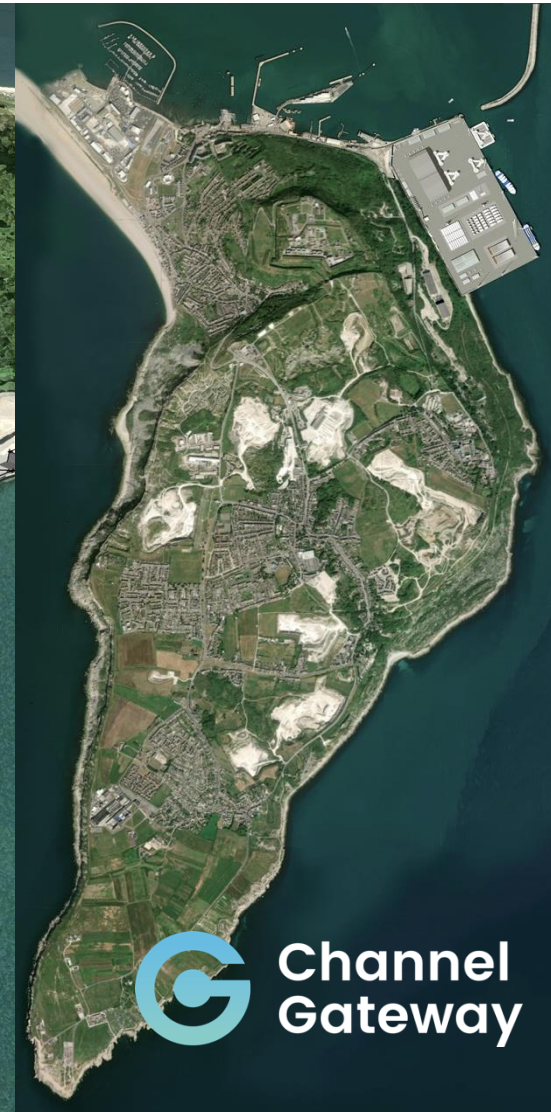
Channel Gateway Offshore Wind Hub Port



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- Up to 1000 local, long-term jobs on site
- Over 5000 jobs in the supply chain
- Supported by a training and skills development programme
- Deliverable in around 5 years
- Marine-facing activities, complements existing port
- Anchor to realising the SW Multi-Ports Strategy



Channel
Gateway

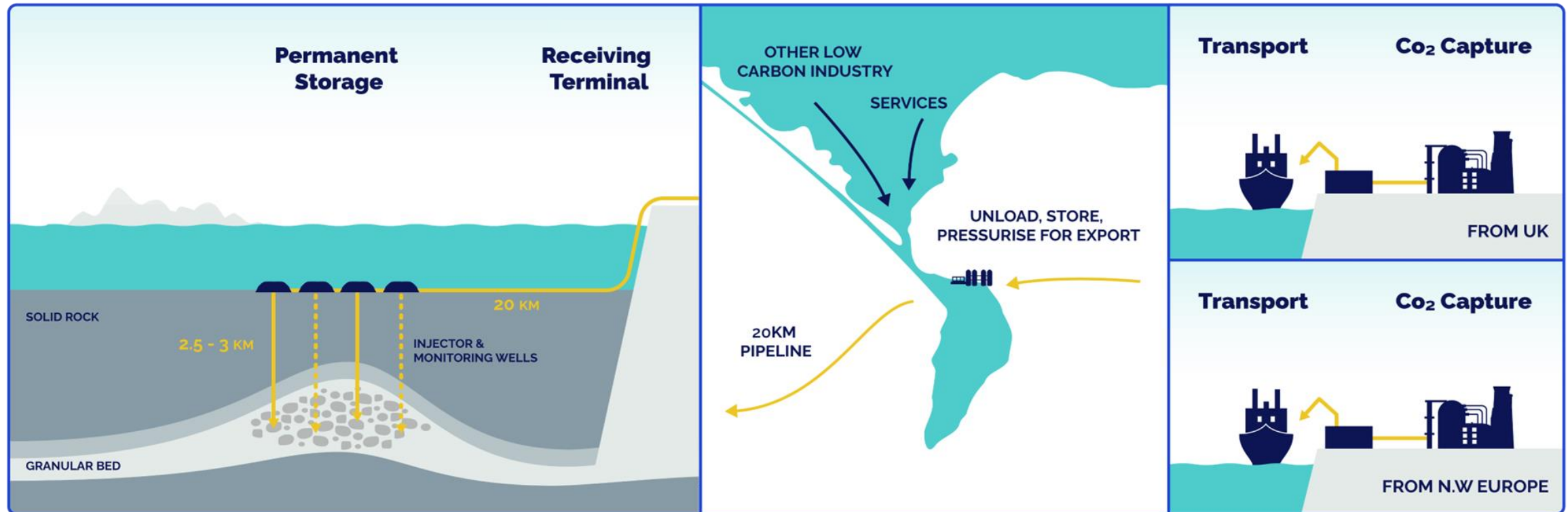


Azuli International : The Dorset Carbon Capture Opportunity: helping to abate carbon and reduce rate of climate warming

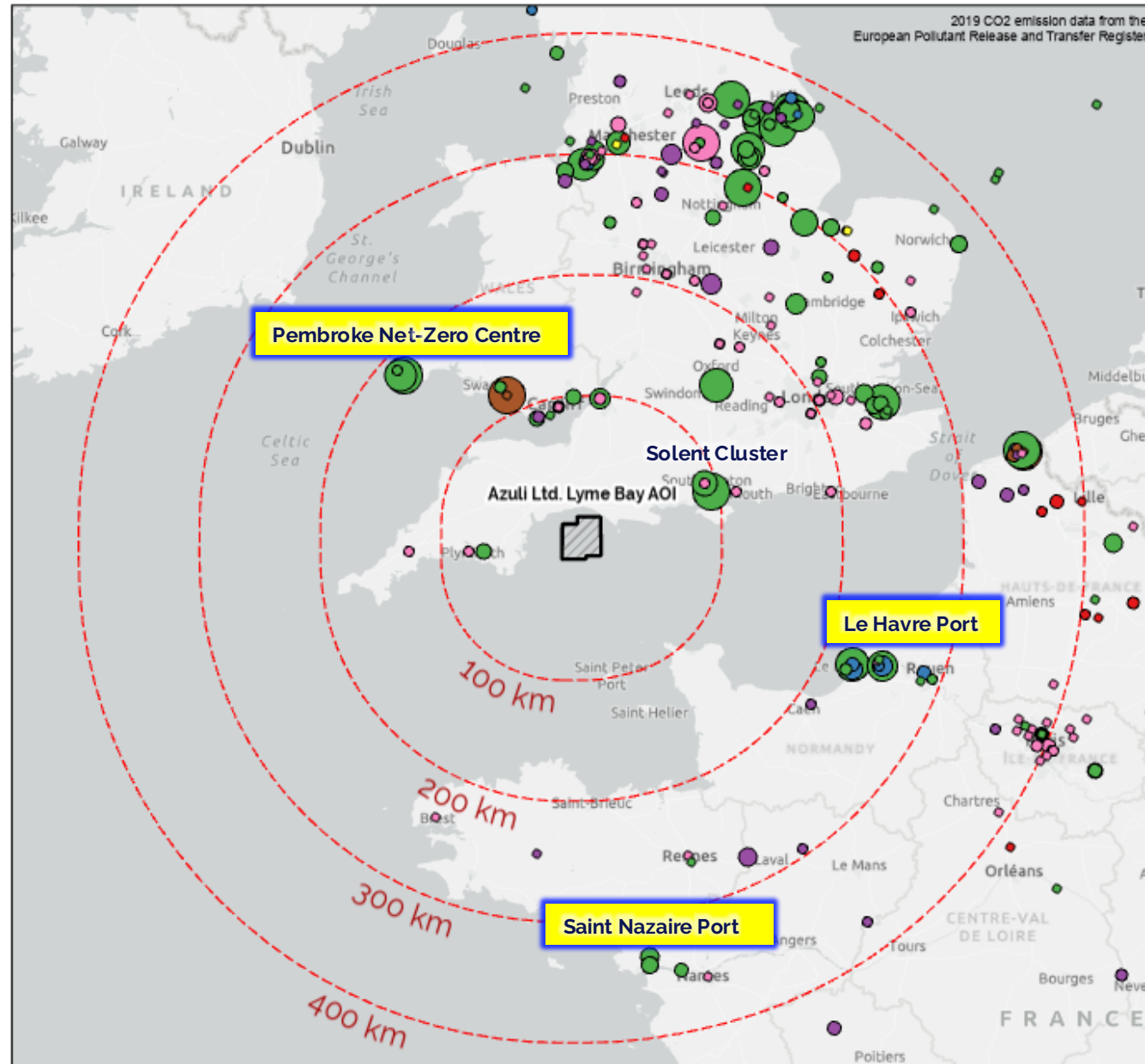
THE UK'S LARGEST CLUSTERS BY INDUSTRIAL EMISSIONS ONLY



Lyme Bay Carbon Storage Concept:



Southern UK/NW France Emitter Landscape

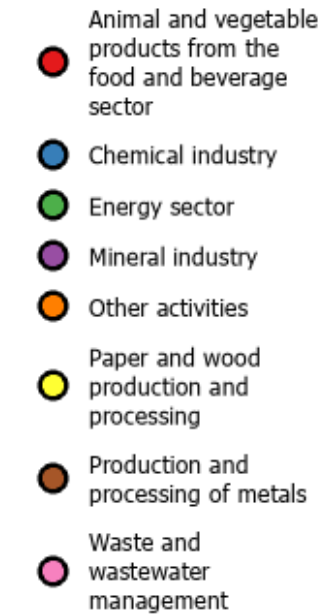


Legend

ktpaCO2



Industry

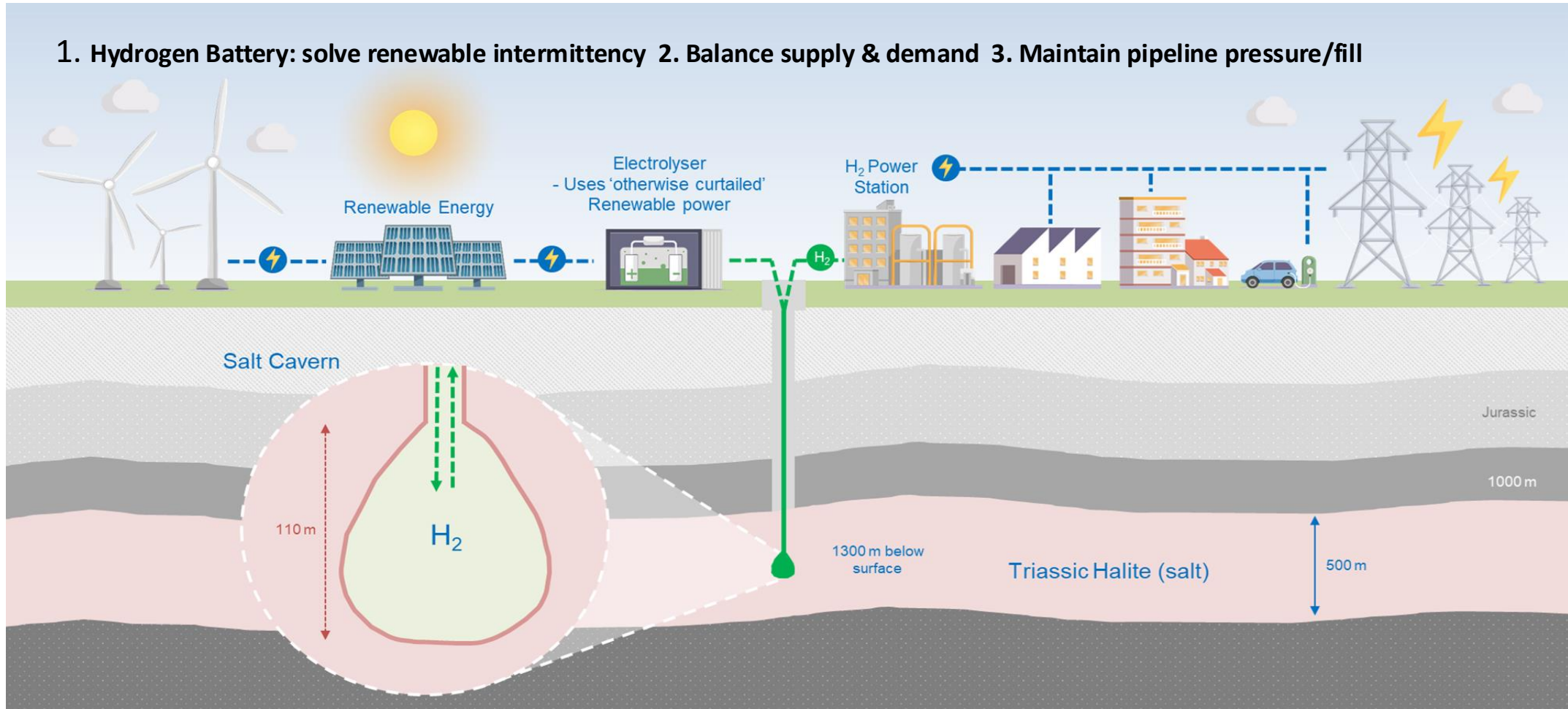


100 km Buffers

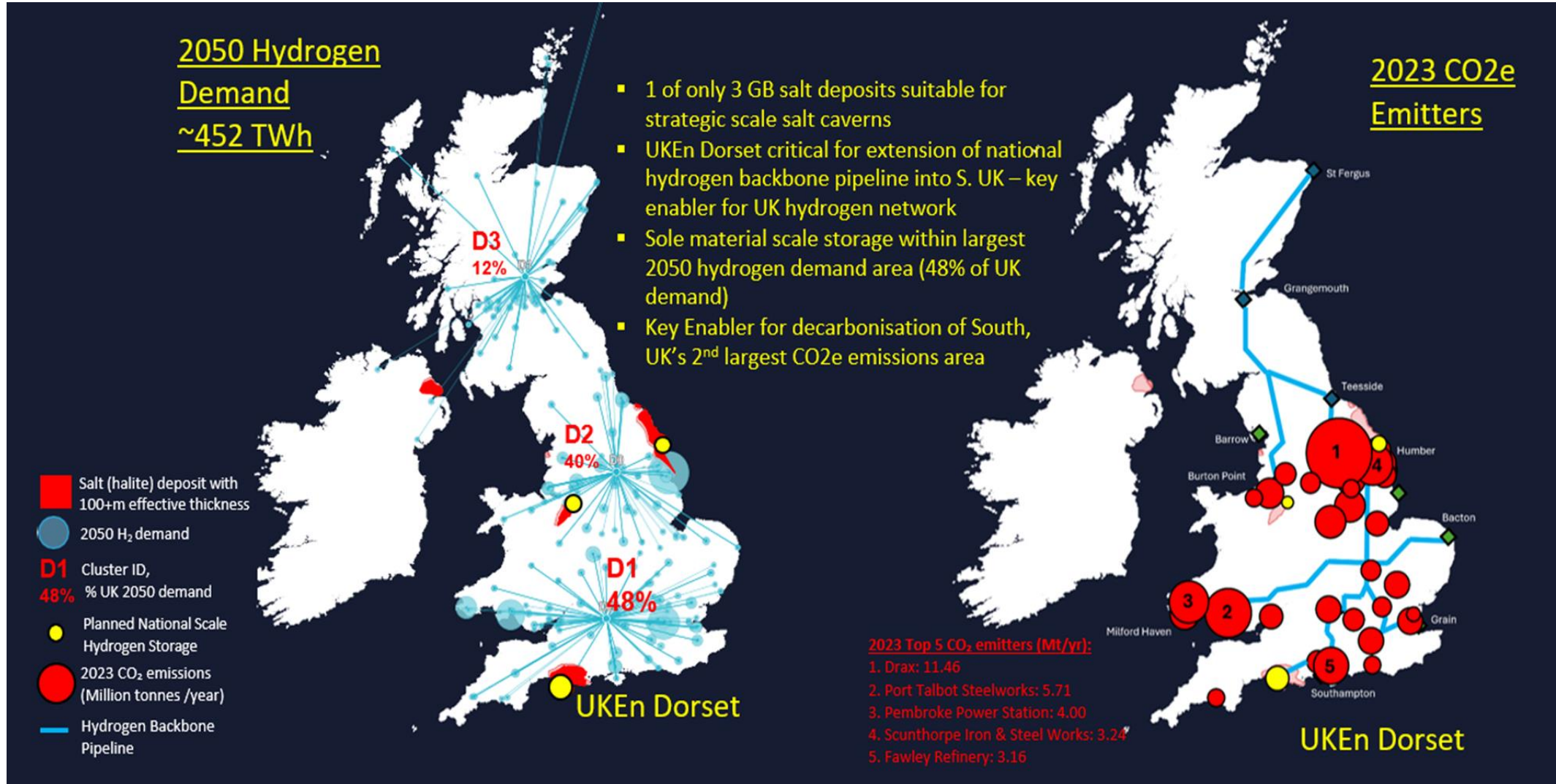
Azuli Lyme Bay AOI



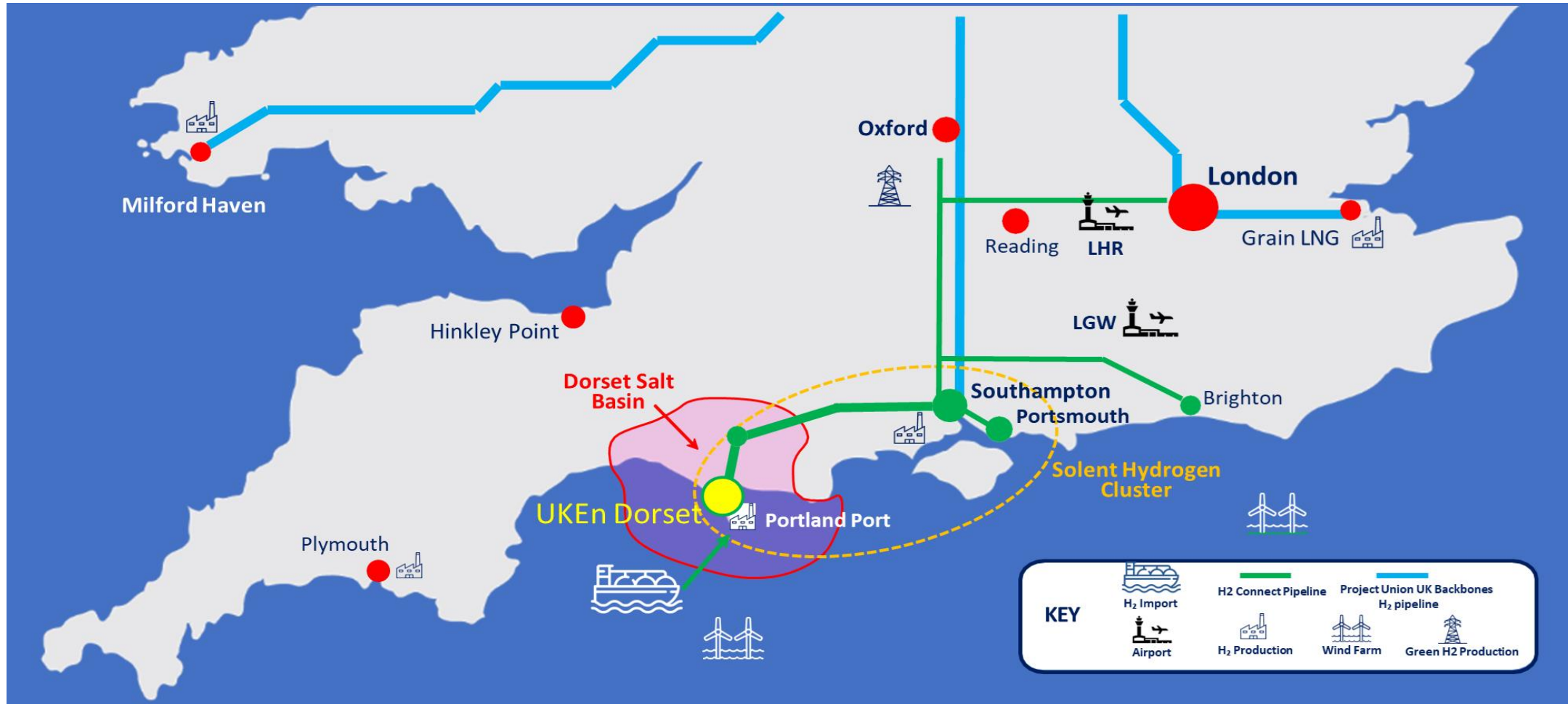
UK En: Introducing Hydrogen Storage & Salt Caverns?



Why Dorset H₂ Storage: Strategic enabler for UK hydrogen



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



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

Welcome queries and discussion over lunch

