Hydrogen East

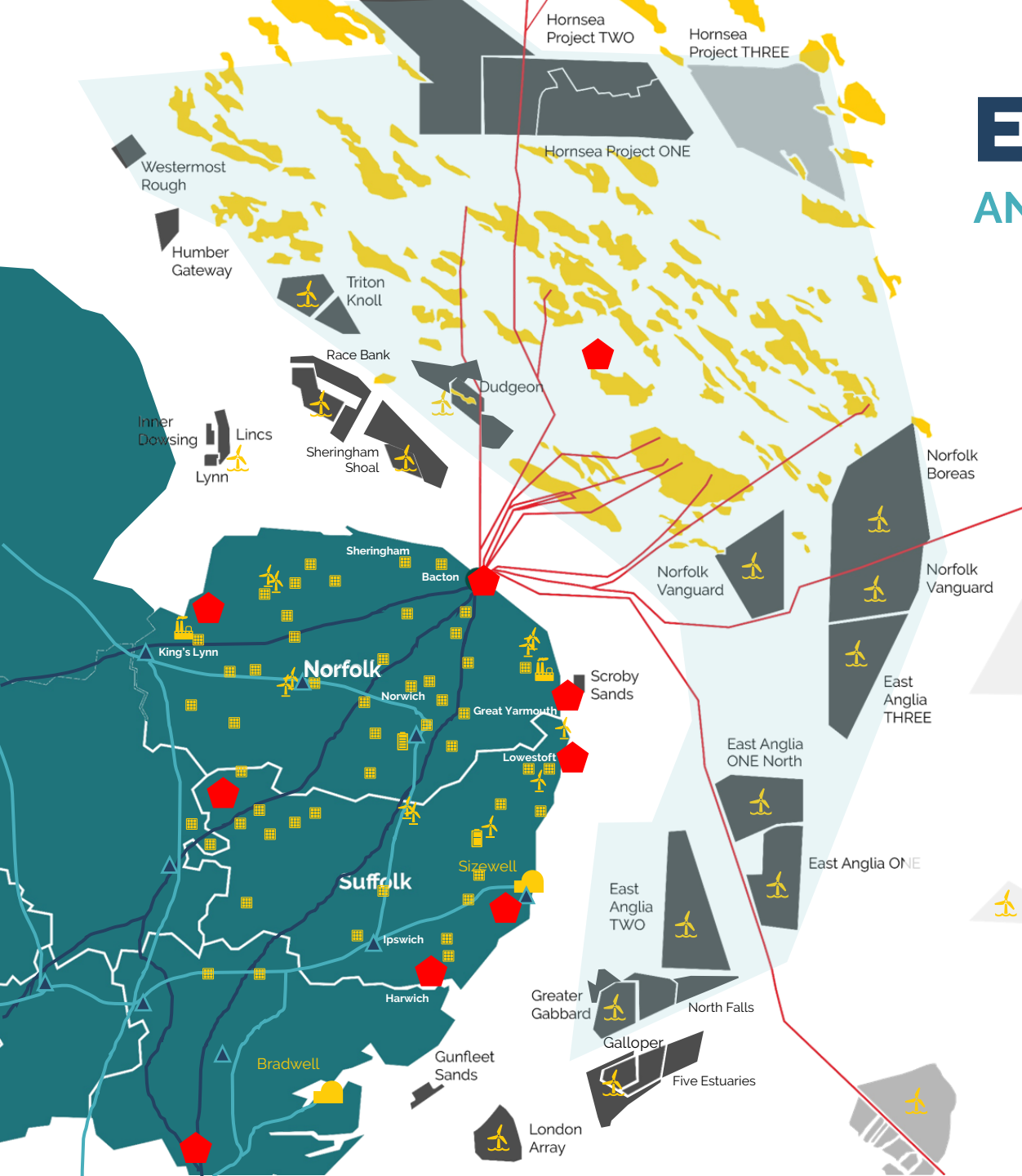
Building a regional Hydrogen Economy
across the East Anglia

Hydrogen:
From Hype to Reality

30th March 2021

EAST ANGLIA

AN ENERGY POWERHOUSE



- at the **heart of the world's largest market for offshore wind**
- the **Southern North Sea is the UK's gas capital,** and prime to explore blue **hydrogen** with **carbon capture and storage**
- a hub for **nuclear** *(new build, existing, and decom)* at Sizewell, Suffolk
- a future UK hub for **low carbon hydrogen** production and servicing

Key:

- Gas Fields
- Bacton Gas Terminal
- Gas Pipelines
- UK Offshore Wind Farms
- European Offshore Wind Farms
- UK Electricity Transmission Network
- UK Gas Transmission Network
- Electricity Substations (Transmission)
- Crown Estate Round 4 Offshore Wind License Areas (Zone 2 of 4)
- Nuclear Power Station
- Gas Power Station
- Solar Farm
- Onshore Wind Farm
- 50MW+ Battery Storage
- **Potential Hydrogen Hub(s)**

Britain's first H_2 terminal?

- Bacton Gas Terminal handles 1/3 of UK domestic natural gas needs.
- Major national gas grid injection point.
- Import / export links to Europe via two interconnectors.

Potentially a major hydrogen terminal, and the UK's primary connection to the proposed European Hydrogen Backbone.

Exploring opportunities for CCUS-enabled blue hydrogen, and green hydrogen from offshore wind.

Scoping study underway, jointly funded by OGTC, ORE Catapult, North Norfolk District Council, and New Anglia LEP.

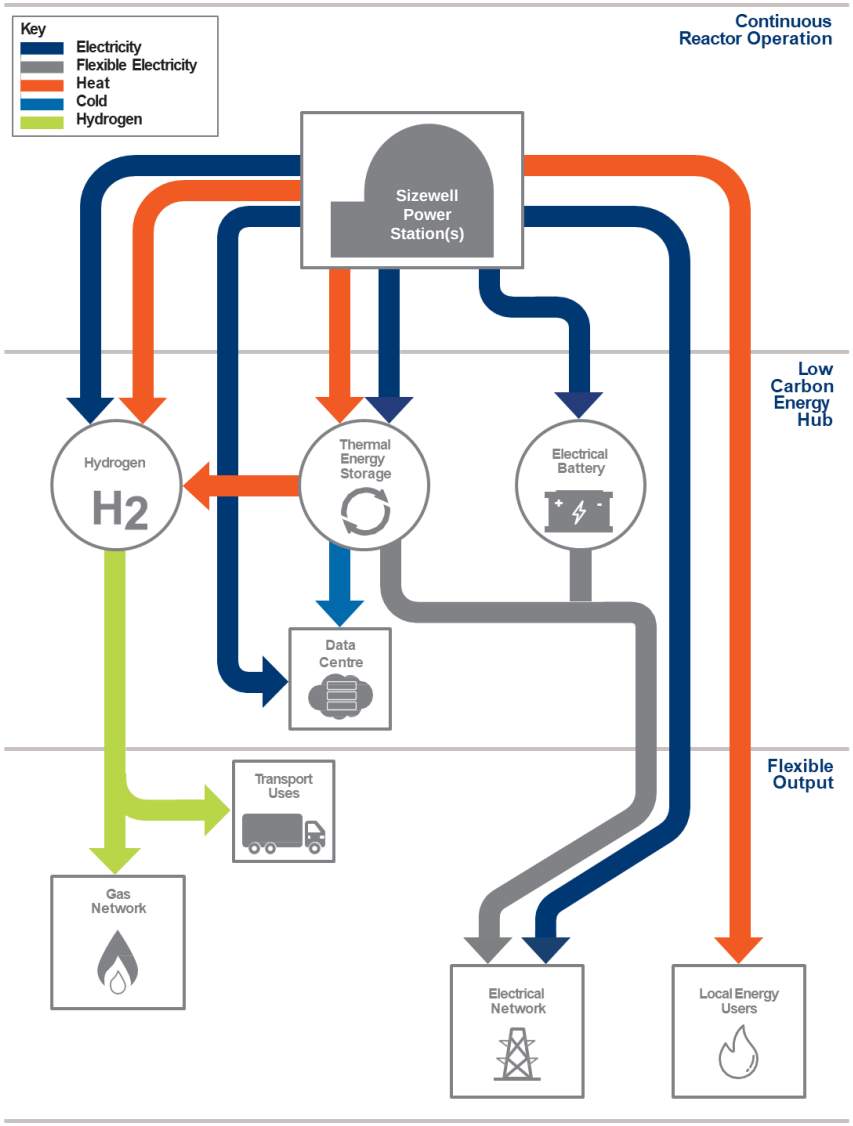
Final report expected April 2021.

Sizewell Clean Energy Hub

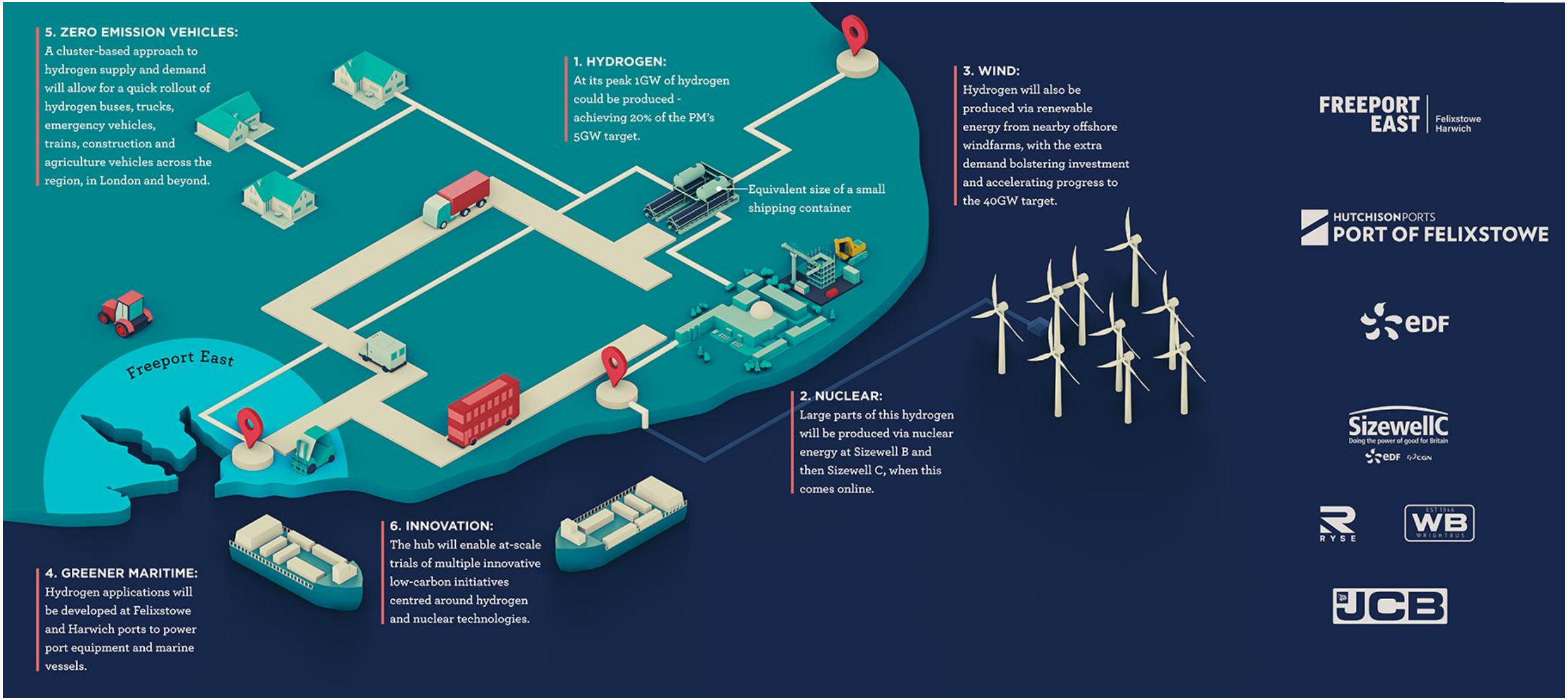
- EDF Energy are developing plans to create a **Sizewell Clean Energy Hub.**
- SZC's continuous reactor operation will produce **3.2GW of low-carbon electricity** and approximately **8GW of low-carbon heat.**
- The clean energy hub could translate this into 2-4GW of flexible electrical output, **green hydrogen** and power and heat for local uses.
- **2MW demonstration plant being scoped, powered by SZB**

Major opportunity to work with offshore wind projects on:

- **hydrogen production**
- **battery storage**
- **thermal storage**



Freeport East – Hydrogen Hub



Onshore renewables and H_2 production

- Creating onshore hydrogen facilities using existing wind and solar assets, coupled with electrolyser plants.
- Potential to create local production and refuelling facilities, supplying low-carbon heat and/or transport fuels.
- Markets already emerging.

Opportunities to invest in local demonstrator projects.

Sites being explored include:

- PowerPark, Lowestoft (Wind/Gas Flexgen)
- Scottow Enterprise Park, Norfolk (Solar)
- Snetterton Business Park, Norfolk (Biomass)
- Mid-Suffolk Business Park (Biomass/Wind)

H_2 vehicle demonstrators

- Refuse trucks
- Buses
- Marine vessels
- Agricultural vehicles
- Trains
- Passenger cars/fleets
- Others?

Working collaboratively with Local Government, industry and business, we can create demonstrators to aggregate demand and create a local hydrogen market.

Hydrogen **East**

Questions?

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