

North East Scotland's Hydrogen Ambition & the Energy Transition Zone

Road to Decarbonisation – Hydrogen Skills

Martin McCormack, Director CCUS & Hydrogen, ETZ Ltd

6th October 2022



An overview of North East Scotland's strengths



Oil & gas infrastructure and expertise



Net Zero Technology Centre



Integrated energy supply chain



ETZ Ltd



Underwater engineering and technology



Industry-focused universities & college



Ongoing Energy Transition projects



Port infrastructure and capability

A region with the right credentials and a strong track record of delivery to embrace a low carbon energy future

Energy Transition Projects Key

- ScotWind leasing areas
- CO₂ Storage Sites
- ⚙️ Existing windfarm
- Existing Pipeline
- Z ETZ
- ⋯ Future Pipeline

North East Scotland current & future Energy Transition projects

Aberdeen City current & future hydrogen projects

Aberdeen Hydrogen Hub (Project) 2024



TECA Electrolyser
350kg H₂ / day



Kittybrewster HRS
360kg H₂ / day

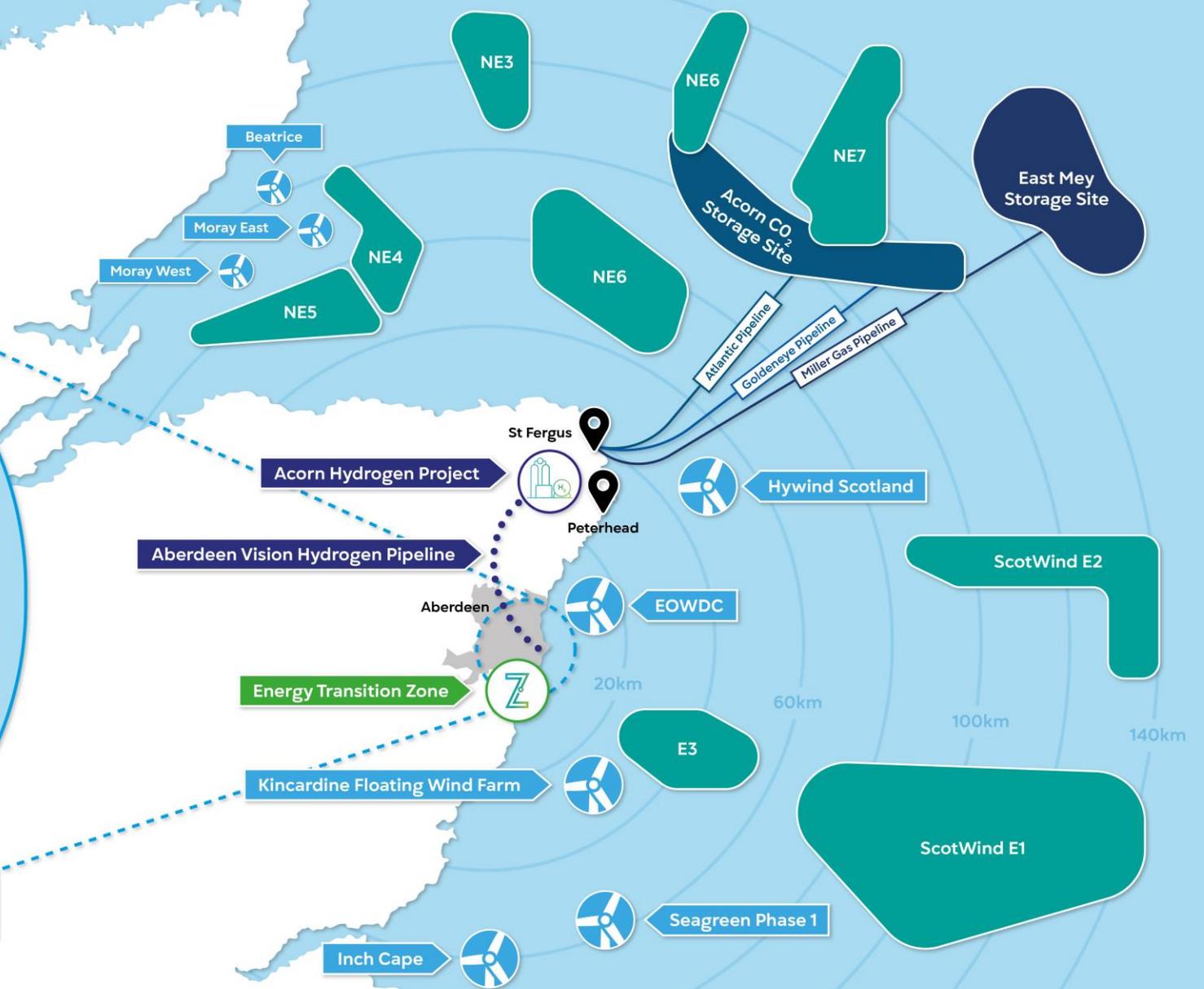
ACHES HRS
360kg H₂ / day



Energy Transition Zone
Hydrogen Campus

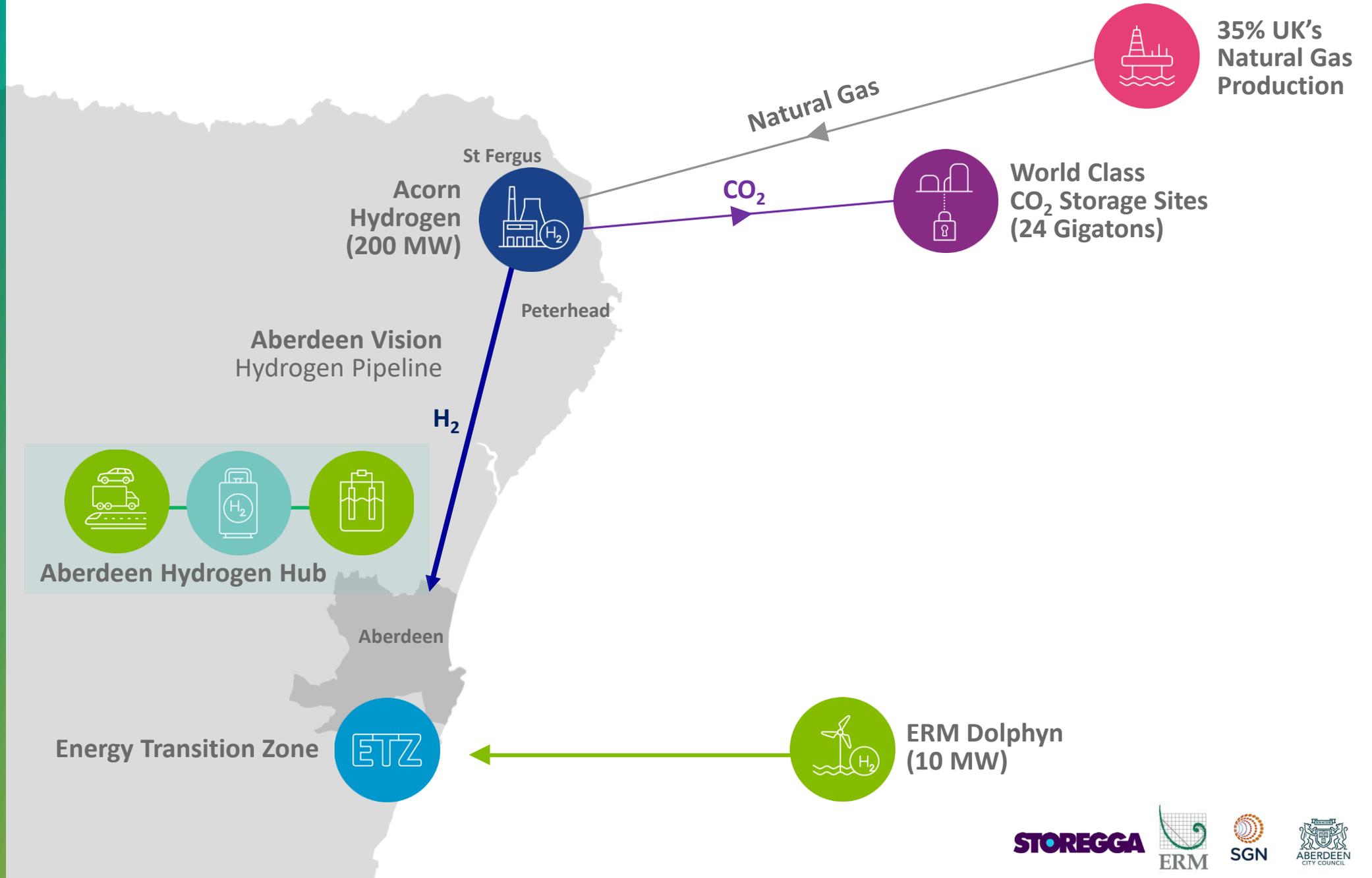


ERM Dolphyn Project (2024)
2000kg H₂ / day initially





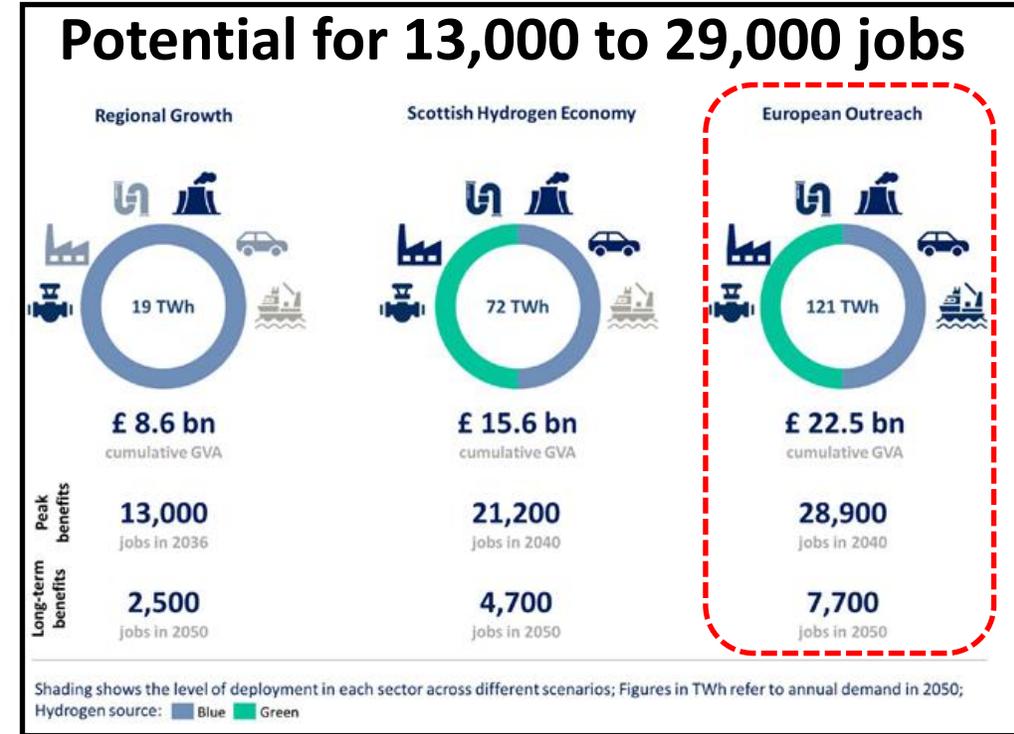
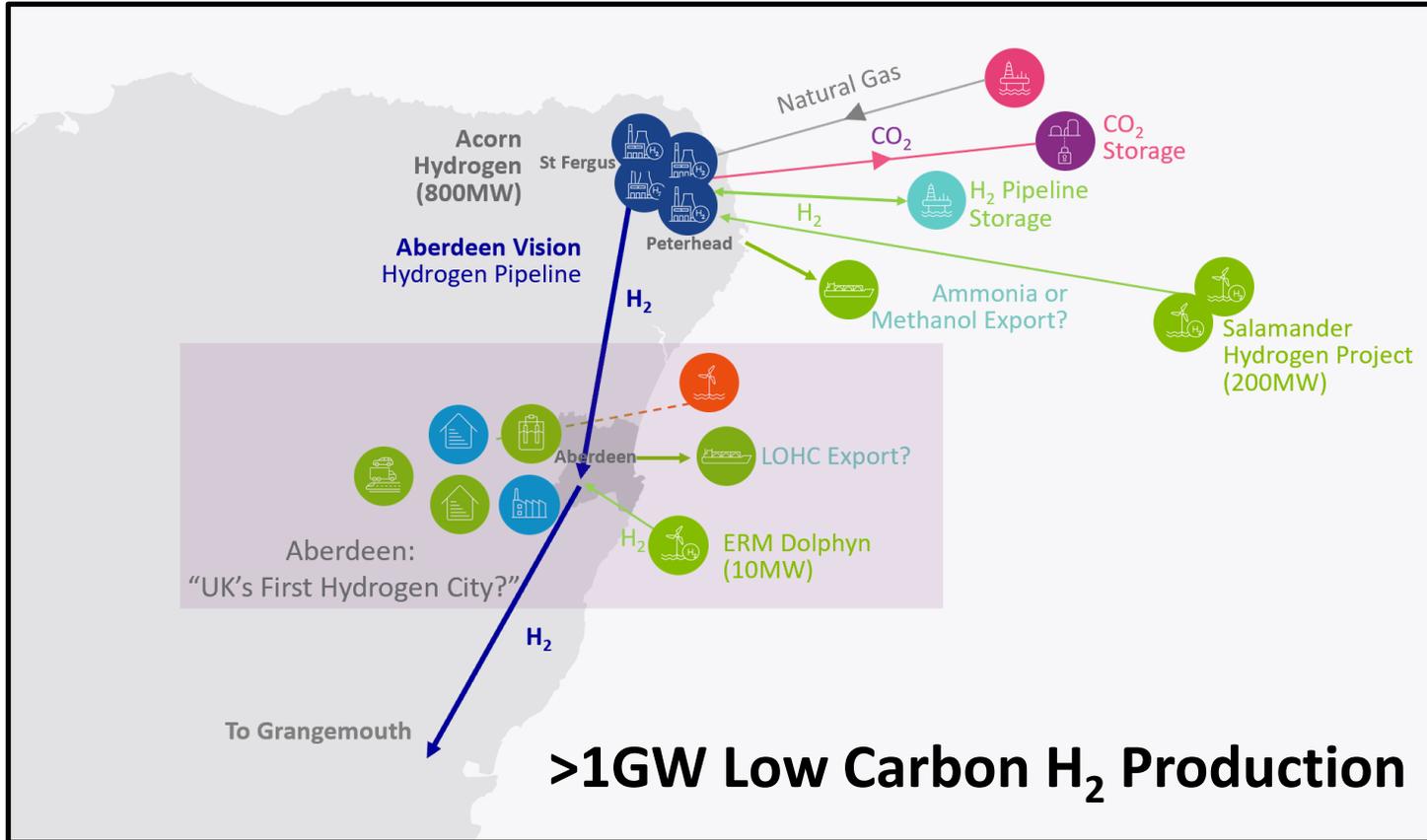
North East Scotland: Hydrogen Projects Operational by 2025-27



STOREGGA



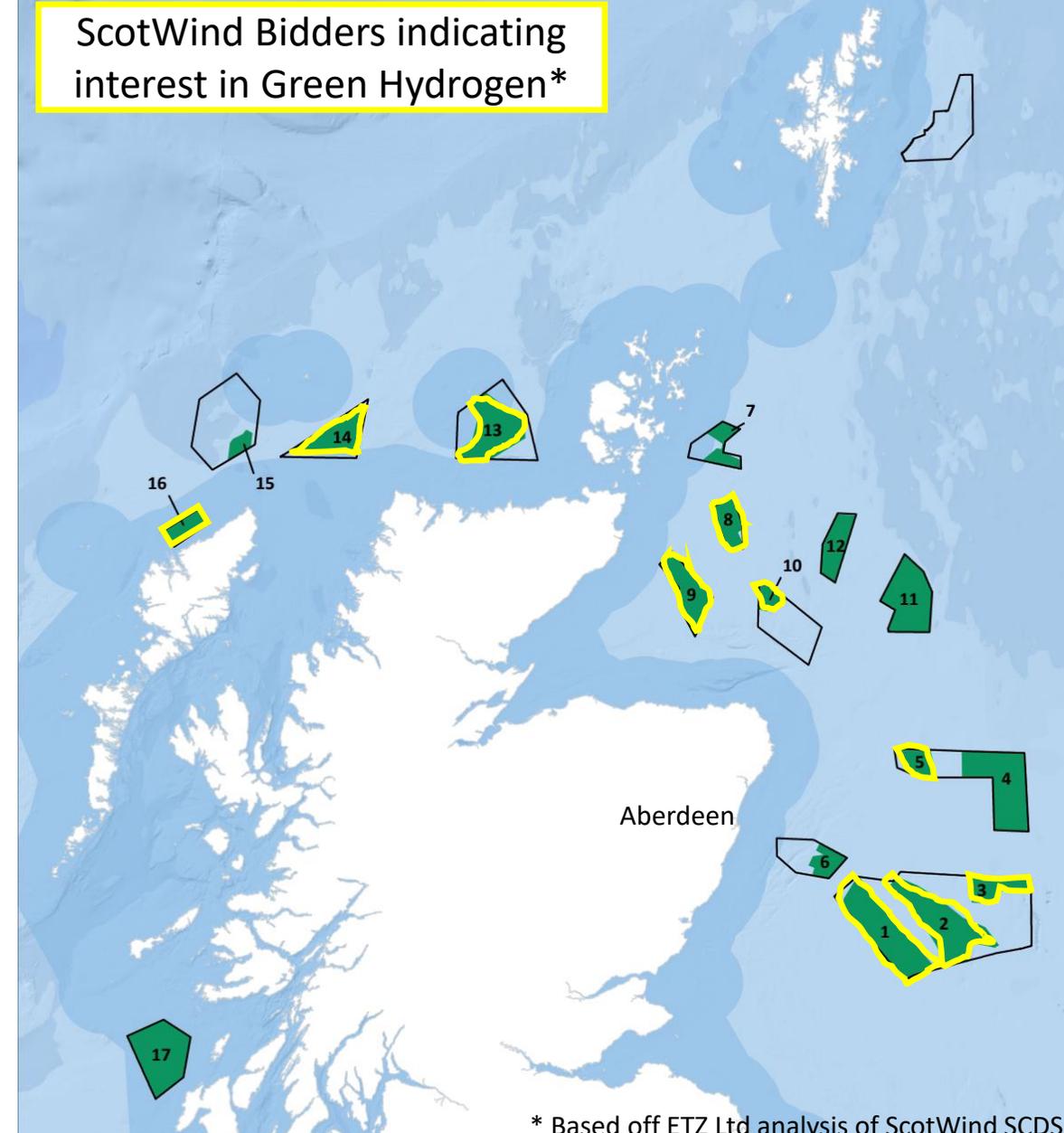
NE Scotland's Hydrogen Economy by 2032: Regional, National & International Impact



“North East Scotland is well placed to deliver a substantial proportion of the UK’s future low carbon hydrogen requirements as a result of a number of current and near future hydrogen projects, which combined are expected to generate in excess of 200MW by 2025-27. These projects can be scaled up quickly to contribute over 1GW (20%) of Scotland’s low carbon hydrogen production target of 5GW by 2030-32”.

- Ten of seventeen successful ScotWind leasing round bidders make reference to potential for green hydrogen, e.g.:
 - BP / EnBW: 400MW;
 - Offshore Wind Power consortium (including TotalEnergies).
- Some may select to progress Power-to-X options as part of their development plans to offset CfD funding and grid access timing challenges.

ScotWind Bidders indicating interest in Green Hydrogen*



* Based off ETZ Ltd analysis of ScotWind SCDS

Energy Transition Zone & Aberdeen South Harbour

£400m investment

- Largest marine infrastructure project underway in the UK providing added capacity to existing North Harbour (UK's oldest business, established in 1136)
- Deep Water, non-tidal providing 24/7 access
- Extensive laydown (125,000m²) & quayside space (1,400m)
- Gearing up to benefit from proximity to ScotWind licensing areas
- Operational in 2022



Introducing the Energy Transition Zone (ETZ)



What is ETZ?

- Adjacent to the new **£400m Aberdeen South Harbour** and is a mix of greenfield sites and the brownfield industrial areas of East Tullos and Altens.
- ~70 ha (gross) of net zero space acting as the **commercial gateway for large scale offshore renewables and high value manufacturing.**
- An **exemplar low carbon development** and home to leading-edge innovation, including innovation centres **for floating offshore wind & hydrogen.**
- Supporting **green recovery** post COVID-19 & aligned to **Scotland's net zero targets.**
- Working with the community through its development, provides an opportunity to **advance equality of opportunities, deliver community benefits and support inclusive growth & just transition.**



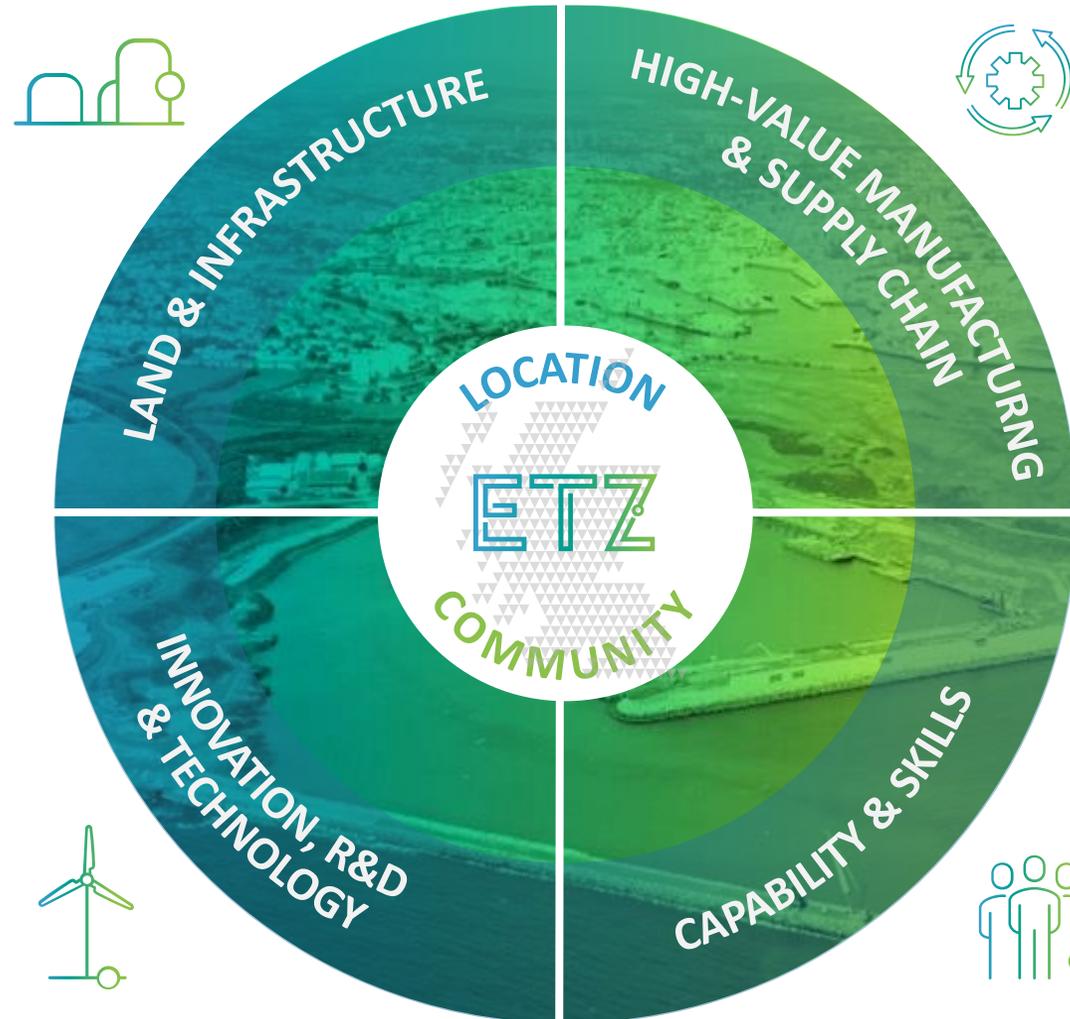
Who is ETZ Ltd?

- ETZ Ltd was created in April 2021 with an established governance structure & experienced leadership team to help deliver the region's ambition to be a **globally recognised integrated low carbon energy cluster.**
- ETZ Ltd is a **not for profit, private sector led** company operating on the basis of no commercial gain.
- Founding members are Opportunity North East (ONE), Port of Aberdeen (POA) & Scottish Enterprise (SE).
- ETZ has **secured £53m in public funding from Scottish & UK Governments and £5.7 million funding from ONE.**
- ETZ will support **2,500 direct jobs**, with a further 10,000 energy transition-related jobs across the region and will create **£400 million of added value.**

ETZ Focus areas: Hydrogen & Skills



- Leverage the £400M Aberdeen South Harbour (ASH) Investment
 - Enable offshore wind and hydrogen high value manufacturing
 - Deliver green space enhancements and community facilities
 - Facilitate gaining Green Freeport status
-
- Home of National Floating Offshore Wind Innovation Centre
 - Site of proposed Green Hydrogen Test and Demonstration Facilities
 - Energy Incubator & Scale-up Hub to support green start-ups and scale-ups
 - Applied R&D linked to advanced manufacturing
 - A centre for data and digital innovation



- Attract inward investment for high value manufacturing
 - Supporting infrastructure for emerging hydrogen production, storage and distribution business
 - Provide scale-up and mentoring support to capitalise on new energy transition opportunities
 - Internationalisation & export of offshore engineering, manufactured products
-
- Build on existing energy skills and experience in the region
 - Work with the local community to deliver inclusive job opportunities
 - Establish the National Energy Skills Accelerator (NESA)
 - Develop Energy Transition Pathway for supply chain & deliver other NEERSF re-skilling programmes



Offshore Wind Campus
FLOWIC

Skills Campus
NESCOL

Innovation Campus
Energy Incubator &
Scale-up Hub

Hydrogen Campus
GHTDF
ERM Dolphyn

High Value Manufacturing

Marine Gateway
Aberdeen South Harbour

**Road / Rail / Marine
H₂ Refuelling**

Torry

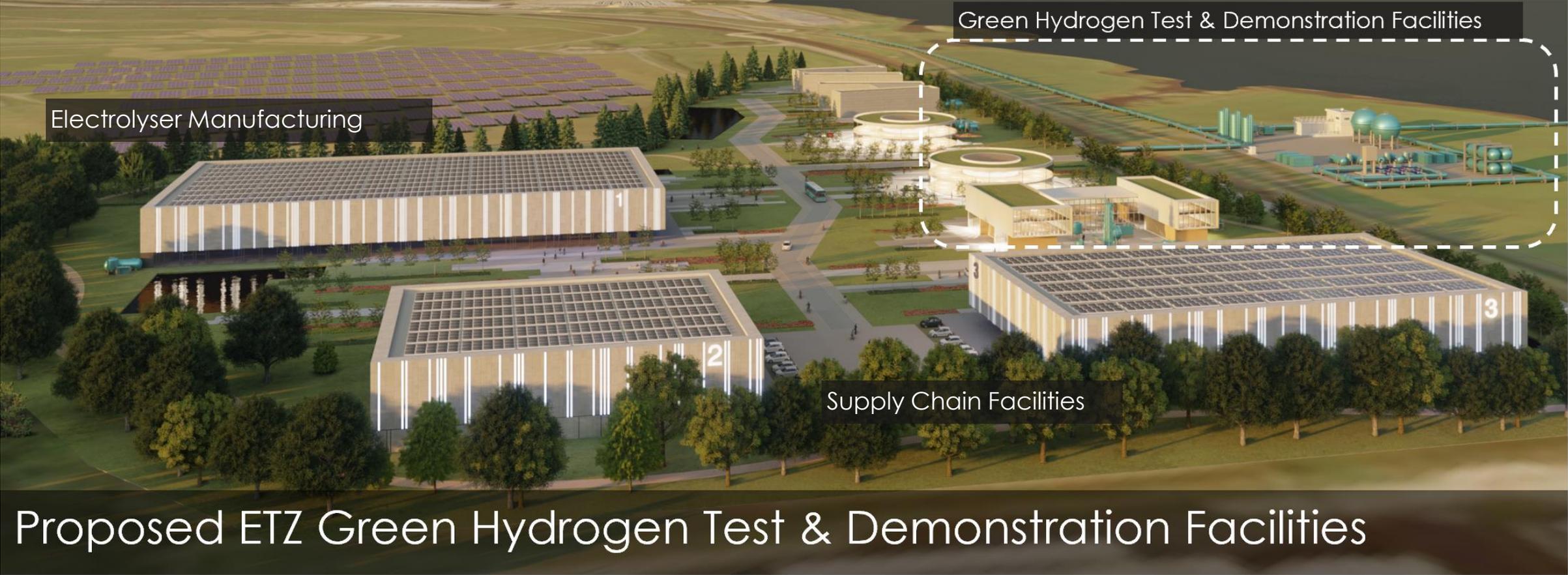
East Tullos

Alpens

Energy Transition Zone

Indicative Conceptual Model
Subject to Planning Consent

Proposed ETZ Hydrogen Campus





NETZ ZERO

ENERGY TRANSITION ZONE

For further information / feedback on the proposed Energy Transition Zone, contact:

Martin McCormack: martin.mccormack@etzltd.com