



Shetland's Collaborative Energy Future

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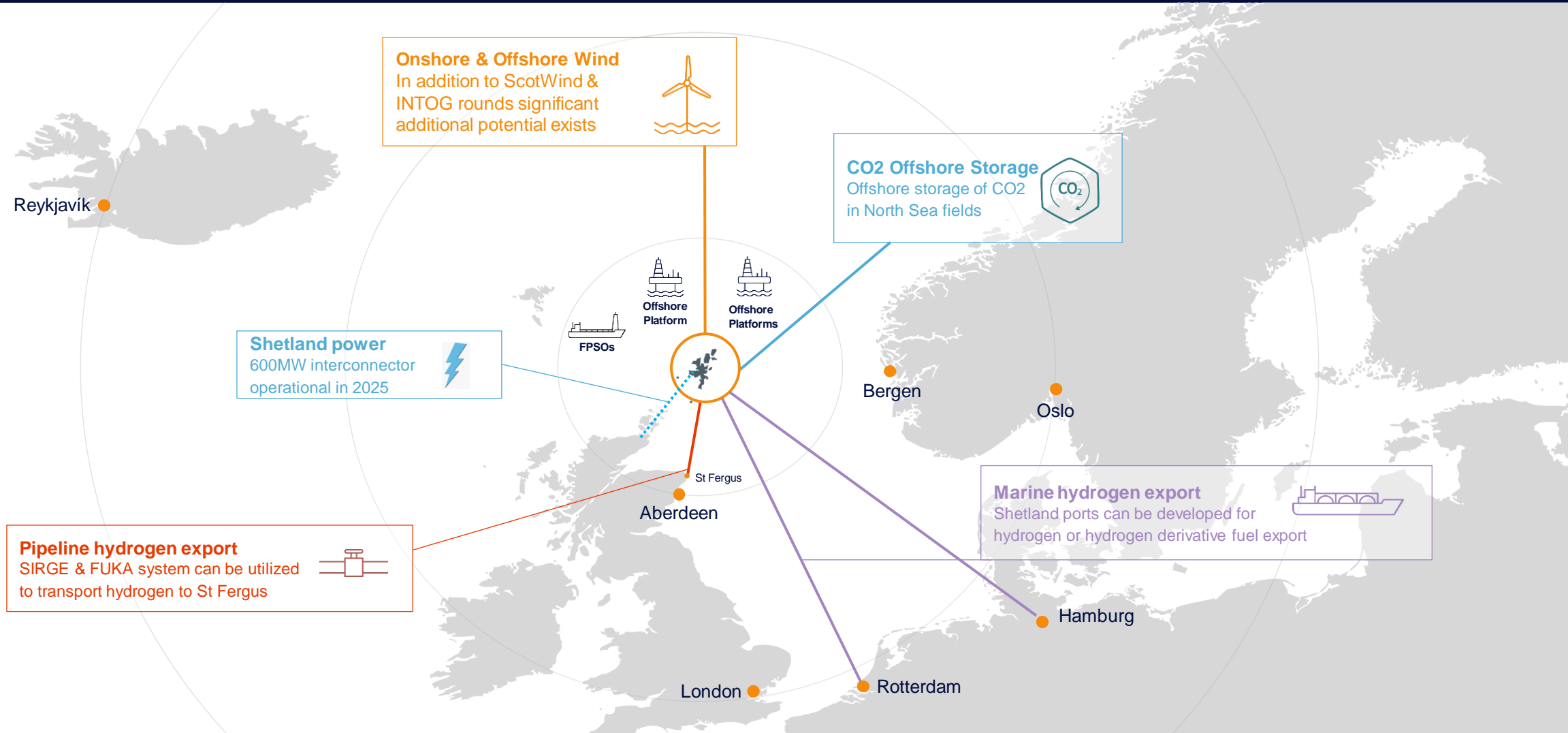
Highlands and Islands Enterprise
Iomairt na Gàidhealtachd 's nan Eilean

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Shetland Regional Energy Hub



Create

Create on Shetland a green hydrogen export business at industrial scale by harnessing offshore wind power and creating new jobs

Transform

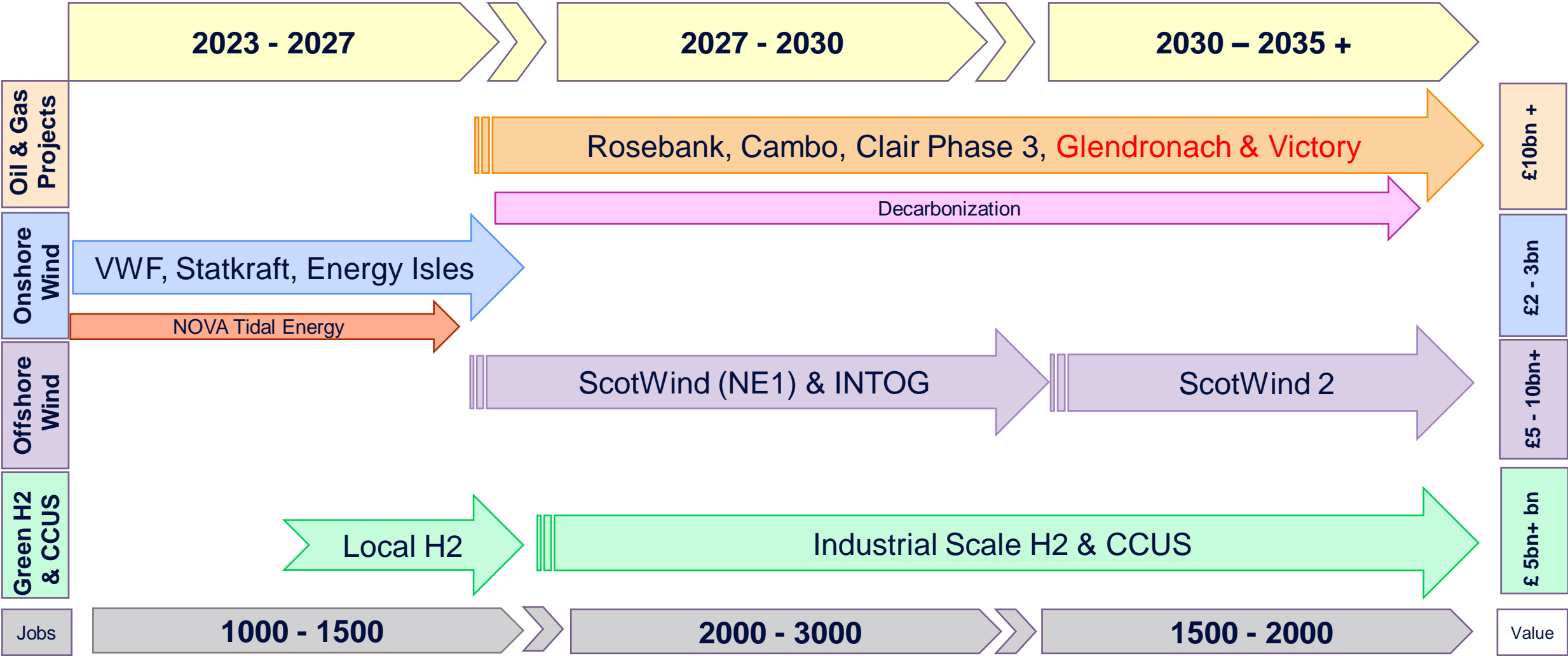
Transform Shetland's current dependency on fossil fuels to affordable renewable energy to address fuel poverty and improve community wealth

Enable

Enable offshore oil and gas sector transition to net zero by electrification, utilising initially onshore wind, sustaining thousands of jobs and security of supply

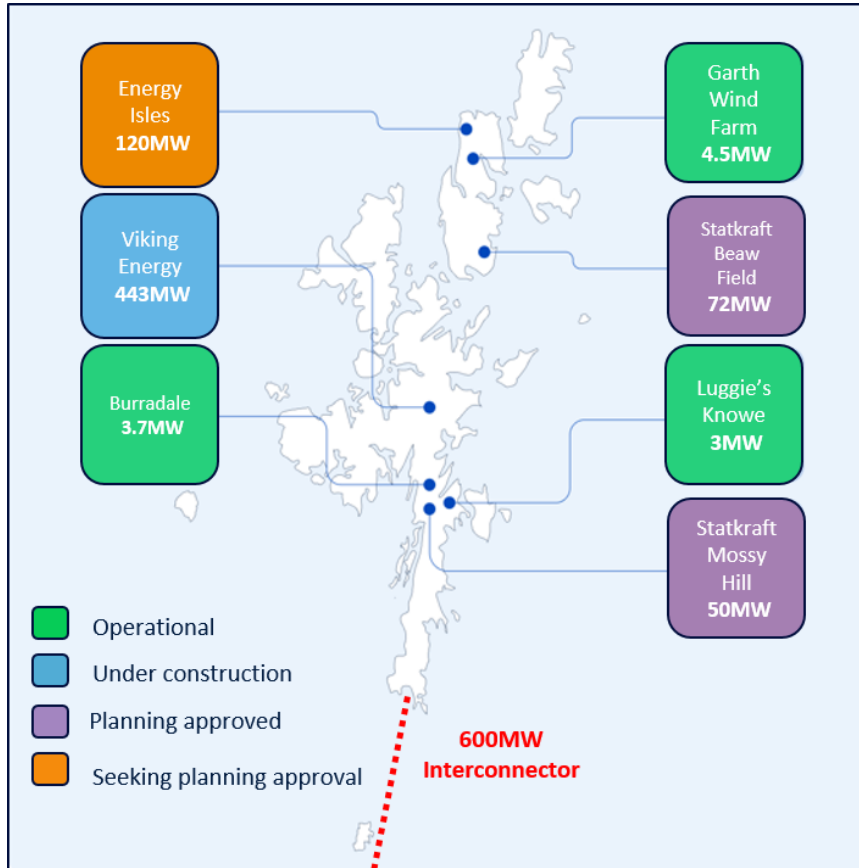


Shetland Project Pipeline



Onshore Wind & Tidal

Onshore Wind

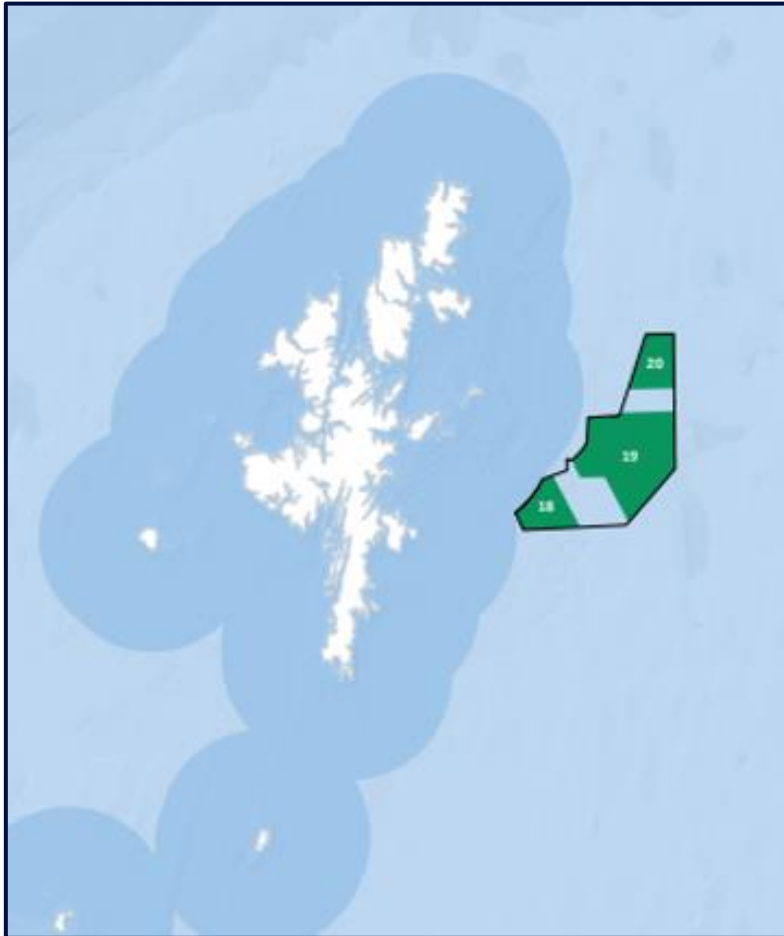


Tidal

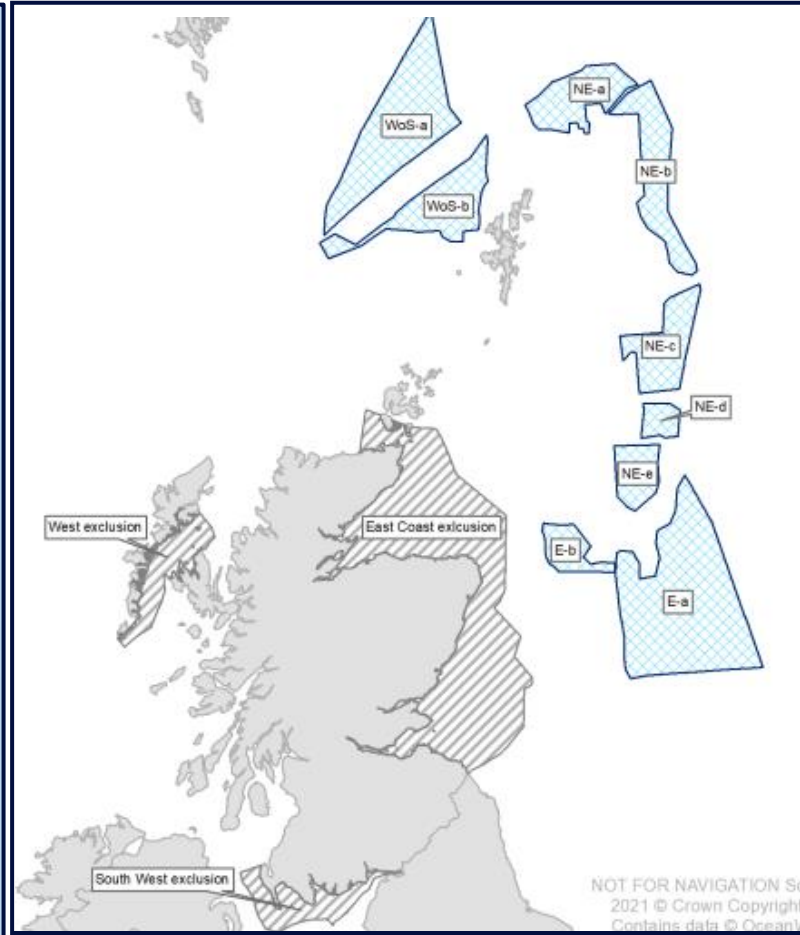


- **Onshore Wind:** Over 0.75GW available by 2028 providing local power, export & potentially green hydrogen locally
- **Tidal:** Significant local contribution of over 15MW by 2028
- **Next Steps:** Utilizing onshore wind & tidal energy to start generation of green hydrogen

ScotWind



INTOG



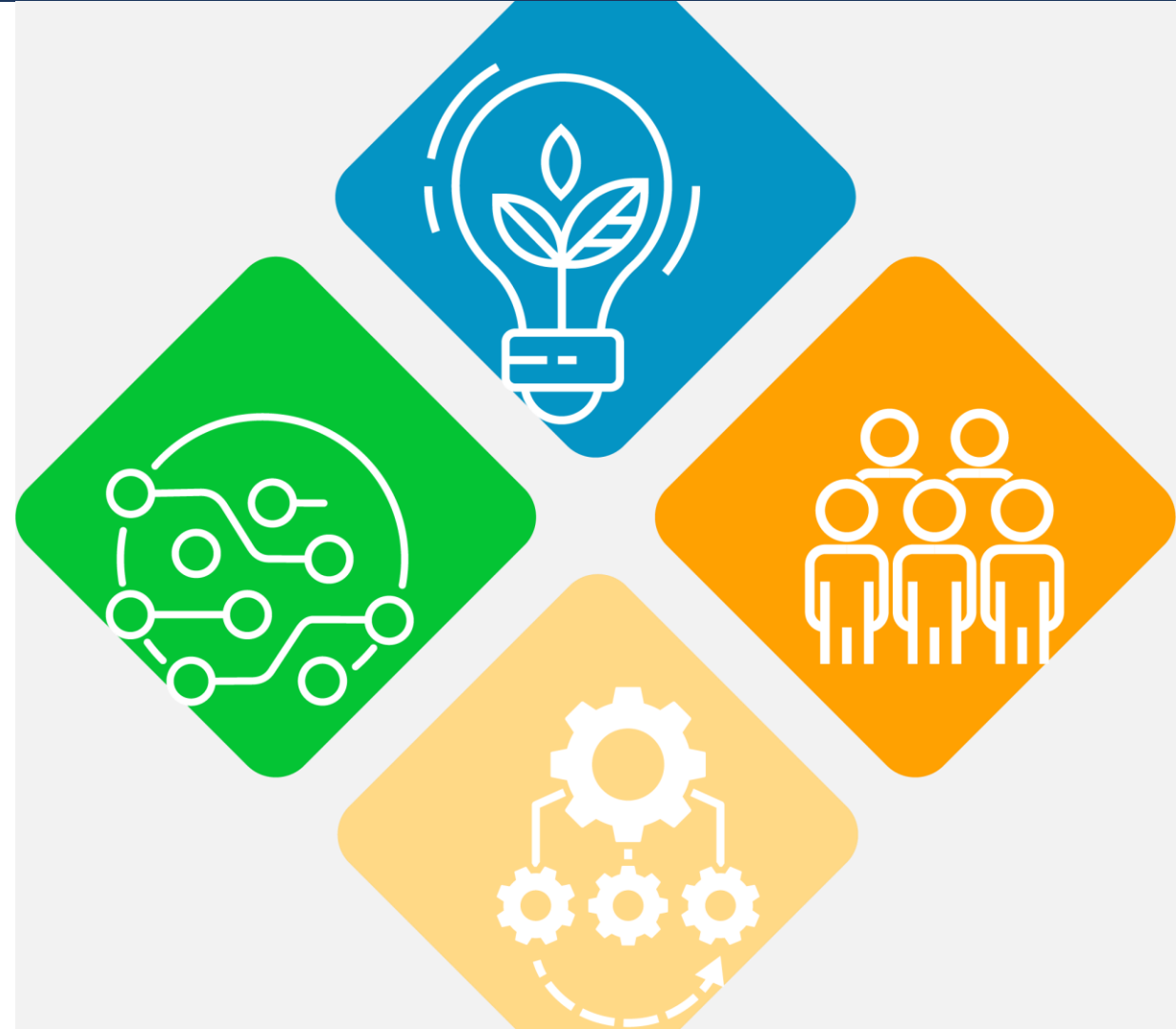
- **ScotWind:** NE1 awards made to Ocean Winds, Mainstream RP & ESB for 560sq kms with 2.8GW wind energy for green hydrogen production
- **INTOG:** Interest shown by wind developers though no bids accepted
- **Next Steps:** Working collectively with NE1 offshore wind developers

Shetland Energy Strategy 2045



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- **Audience**
 - Community and (potential) project delivery partners
- **Purpose**
 - Give an overview of where Shetland is now
 - Where we need get
 - How we get there
 - Interlinkages
- **Ambition**
 - Achieving a secure and affordable energy future for Shetland while reducing carbon emissions to net zero.



Why

- Shetland isn't like anywhere else
- Highly dependent on oil and gas and vulnerable to change,
- Lessons learn from the past
- Net Zero route map has quantified how much change is required
- Top down change can take Shetland some way towards net zero and our renewable resource far exceeds our demand.

Approach

- A place based approach is more likely to be effective at delivering behaviour change.
- A collaborative approach, Shetland has a long and successful history in the energy sector, achieved through commitment to a number of key principles, which recognised all parties' legitimate interests and concerns

- “Principles” have been developed in recognition that Shetland is facing a period of significant energy transition with the potential of significant future energy developments
- “Shetland Energy Development Principles” are intended to help protect and promote Shetland's interests; and help achieve “Just Transition” and “Levelling Up” for the whole Shetland community
- Effective communication, partnership and collaboration are essential to ensure Shetland interests at all levels are taken into account

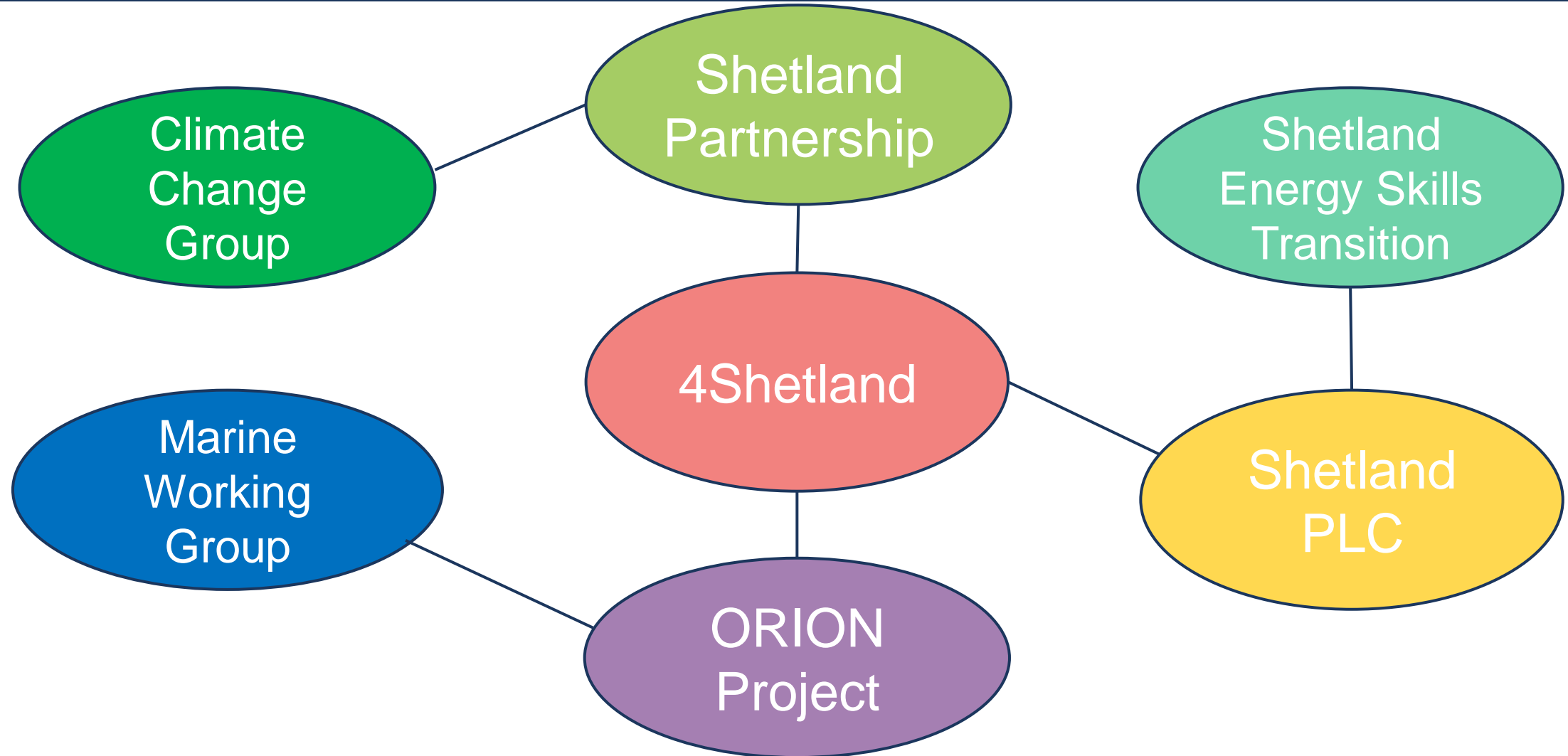
Shetland Energy Development Principles



Environmental Protection	Local Supply Chain Integration
<ul style="list-style-type: none">• Climate Change impact and mitigation• Impacts and protection of wildlife and bio-diversity on and around Shetland• Protection of the Shetland landscape and seascape and containment of impacts on them	<ul style="list-style-type: none">• Local jobs• Contracts and opportunities for Shetland businesses• Commercial Infrastructure• Skills and Training for current, and new, islands residents
Sectoral Co-Existence	Benefits to the Shetland Community
<ul style="list-style-type: none">• Competition for mutually important locations• Impacts on the sustainability of our key natural resources• Any other beneficial or detrimental interactions between sectors	<ul style="list-style-type: none">• Fair Share of value from all developments, offshore and onshore• Financial Benefits to the community• Product Benefits; e.g. affordable energy for Shetland households• Public Goods Benefits



Team Shetland Approach – Partnerships



Team Shetland Approach – Partners



Shetland Supply Chain

Resource



Wind



Wave & Tidal

Infrastructure



H2 plants



Port facilities

Distribution



Electricity



Hydrogen

Transportation



H2 pipelines



H2 carriers

Storage



CO2 storage



H2 storage

Shetland Energy Transition Skills Group

- Ensure that skills issues across Shetland, and wider, energy sector are well understood
- Ensure a skilled workforce is in place to address challenges and capitalise on opportunities
- Ensure a co-ordinated and partnership approach to help address Shetland's skills & training requirements
- Inform and influence Shetland's education and skills provision



Partnership approach working closely with industry



*Non-alliance
Partners*

- **Supervision & Quality Systems**
- Fabrication & Welding (ISO 3834-2, EN 1090)
- Painting & Coatings, Coating Inspection (ICORR Level 3)
- Inspection & NDT (Radiography Bay, CSWIP Inspectors)
- Pipefitters & Bolting (ECITB Competent personnel)
- Machining, CNC Plasma Cutting, Workshop Facilities
- IRATA Rope Access
- Diving (Lloyds & DNV in water surveys, ROV provision)
- Marine (Multi-use Workboats)

- **Support Functions**
- Project Controls (Plan & Schedule, Cost, Change, Risk)
- Contract Support
- Energy Project Management Experience

- Agency manpower
- Scaffolding
- Cranage
- Rigging
- Accommodation
- Transport

- Norn is an alliance of four Shetland-based businesses who have come together around a shared vision for large-scale engineering project delivery in Shetland
- The primary focus of the alliance is the delivery of large-scale offshore wind component assembly in Shetland

Assets and Infrastructure - partnerships

Unique opportunities

- Mothballed airport with area over 500 hectares;
- Sella Ness port;
- Dales Voe Ultra Deep Water Quay;
- Greenhead Base



Shetland Community Benefit



Shetland Charitable Trust started life as Shetland Islands Council Charitable Trust (SICCT) in 1976 when Sullom Voe Terminal began operating

- Set up to receive and disburse money paid by the oil industry to the local community as compensation for the terminal operating in Shetland.
- Over £320m disbursed to charitable activities



Sustaining & developing Shetland communities

Shetland Community Benefit Fund Ltd - an independent co-operative est. 2011 by the Association of Shetland Community Councils for Viking Energy development.

- Two legally-binding agreements:
 - funding of £400,000 a year during construction
 - £2,214,500 a year (index-linked) for the 25 years of operation



Harbour and land rental income

- SIC reserve fund to augment SIC budget in times of necessity

Other forms of community benefit and legacy to deliver ORION vision?

- Accommodation and housing
- Ports and harbours infrastructure
- Fuel poverty alleviation

Structural
requirements



Proposed approach

Deliverable 1 - Shetland EIA scoping response framework. Set out the key areas that should be included within Environmental Protection for developments in and around Shetland. Checklist for responding as a consultee/stakeholder.

Deliverable 2 - Information pack for developers – key local information. Repository of local datasets not available within open/national datasets. Information and case studies on local capabilities. Information on Shetland Partnership working.

Deliverable 3 - Report prepared to present findings at a National level.



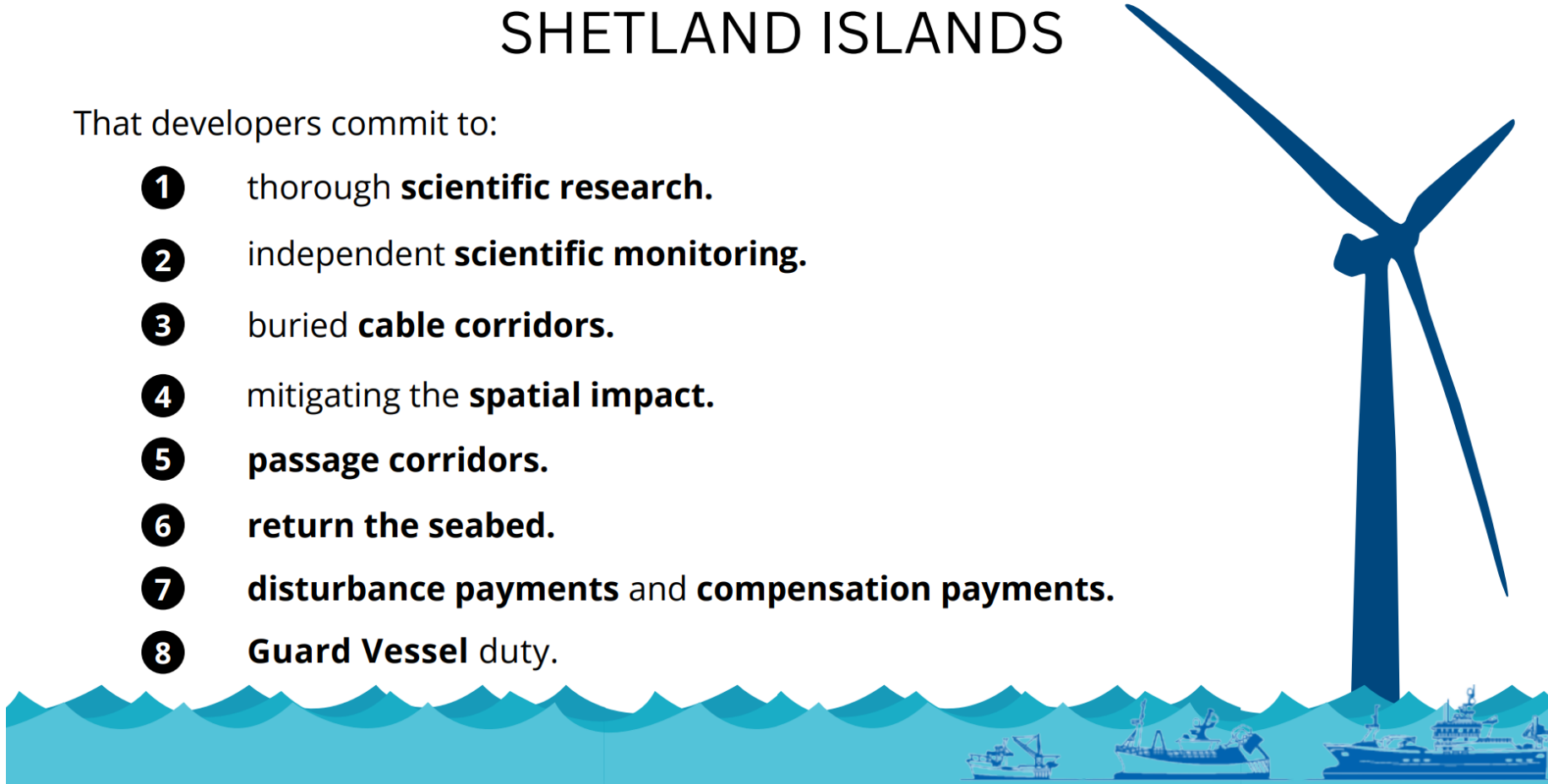
OFFSHORE WIND DEVELOPER PRINCIPLES SHETLAND ISLANDS

That developers commit to:

- ① thorough **scientific research**.
- ② independent **scientific monitoring**.
- ③ buried **cable corridors**.
- ④ mitigating the **spatial impact**.
- ⑤ **passage corridors**.
- ⑥ **return the seabed**.
- ⑦ **disturbance payments** and **compensation payments**.
- ⑧ **Guard Vessel** duty.



CO-EXISTENCE



ORION Vision for Shetland's Clean Energy Future

