HIE
Highlands and Islands Enterprise
Iomairt na Gàidhealtachd 's nan Eilean

Renewable Energy in the Highlands and Islands of Scotland

Elain MacRae
Head of Energy Strategy
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SG Draft Energy Strategy and Just Transition Plan

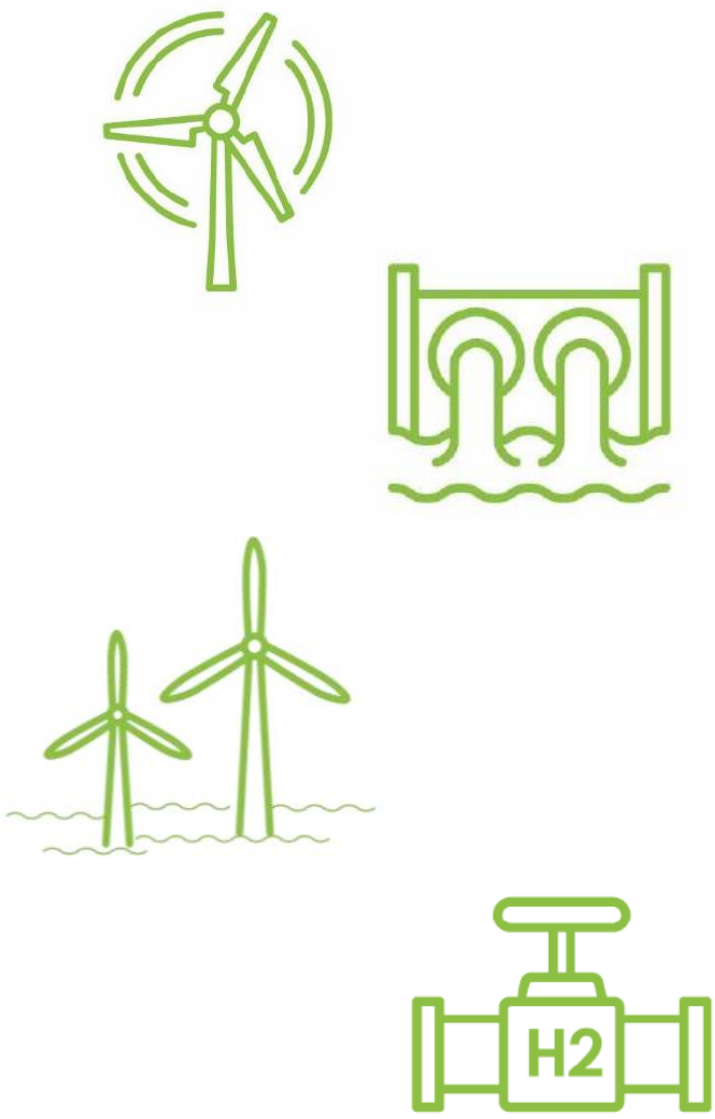
Vision

… a flourishing, climate friendly energy system that delivers affordable, resilient and clean energy supplies for Scotland's households, communities and businesses

Key points

- Scotland's 1st Just Transition plan
- Scaling up renewable energy
- Reducing reliance on fossil fuels
- Reducing emissions from buildings, transport, industry and agriculture

Scot Gov's investment plan over this Parliament



Total £4,938m

Green Jobs, skills and energy transition **£875m**

Including
- Energy Transition Fund - **£75m**
- Green Jobs Fund - **£100m**
- Green Growth Accelerator - **£200m**
- Just Transition Fund - **£500m** over 10 years to North East and Moray

Industry and manufacturing decarbonisation £263m

Including
- Green Hydrogen Fund - **£100m**
- Investment in Wave Energy Scotland to support innovative wave technology development - **£18.25m**
- CCUS Fund - **£80m**
- CCUS Utilisation Fund - **£5m**
- Scottish Industrial Energy Transformation Fund - **£34m**
- Local Carbon Manufacturing Challenge Fund - **£26m**

Heat decarbonisation - £1.8bn – delivered through Heat and Energy Efficiency Scotland.

Including:
- Heat Decarbonisation Fund
- Social housing decarbonisation
- Public sector decarbonisation
- Energy efficiency and fuel poverty measures
- Enahnced support for rural off gas households

Transport decarbonisation £2bn

Including:
- Rail electrification
- Active travel
- Active freeways
- Future Transport Fund
- Bus priority investment
- Zero emission buses

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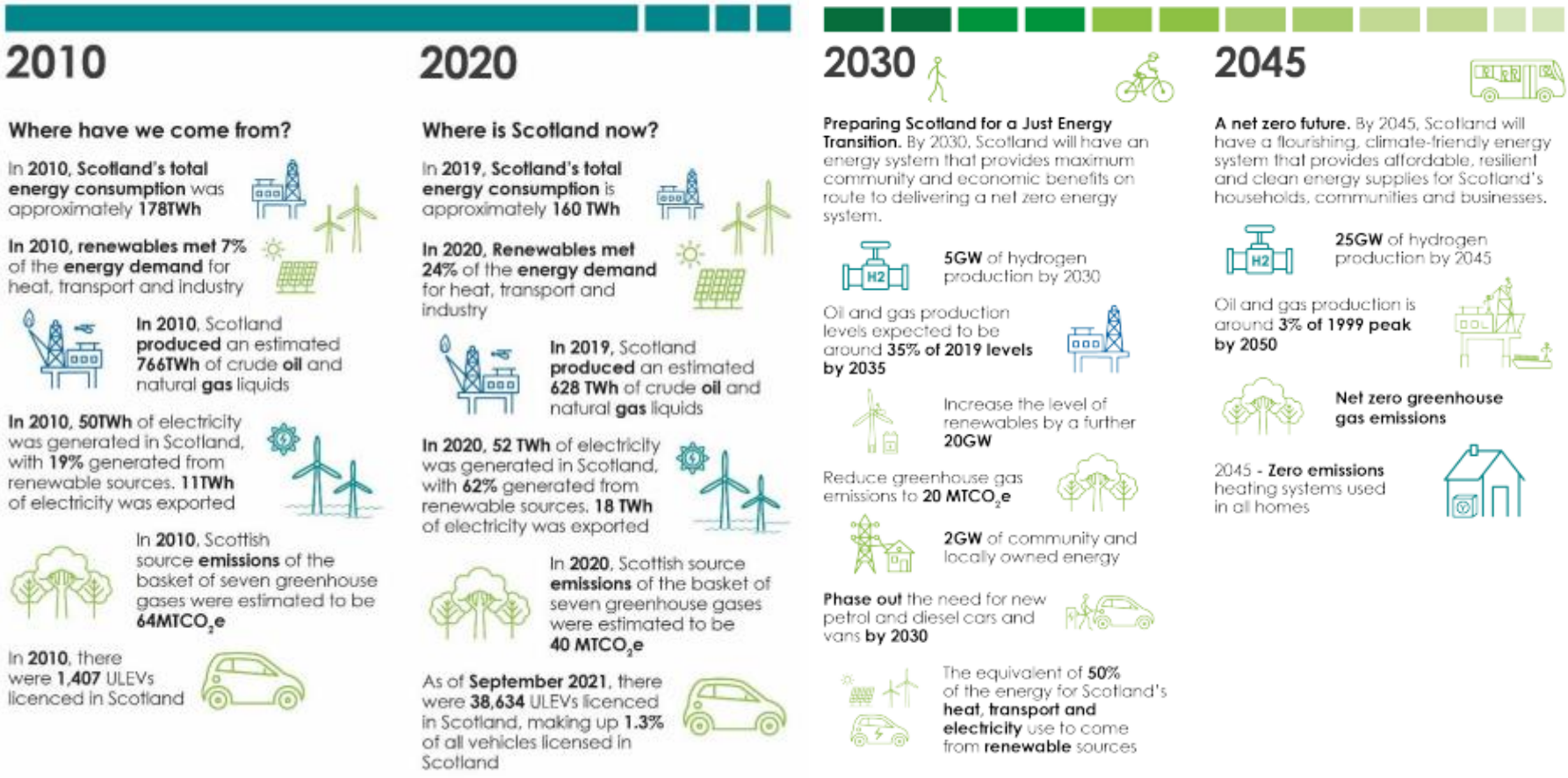
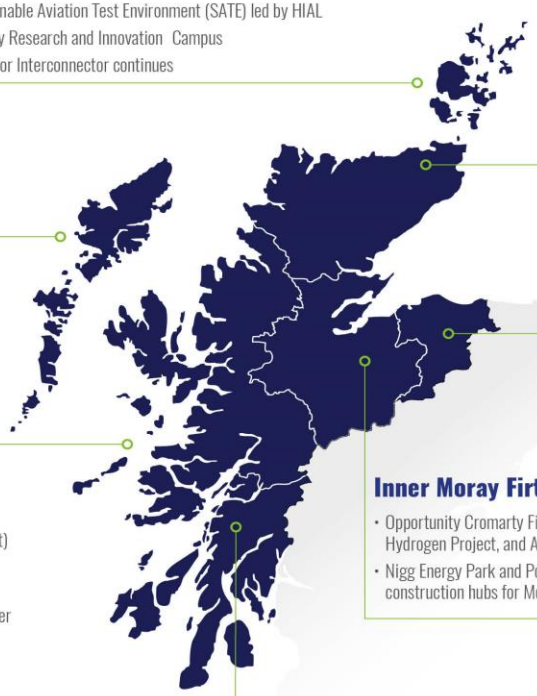
Scotland's Journey to Net Zero



Source: Scottish Government/Scottish Statistics Hub/ EY

Current Energy Developments in the H&Is



Orkney

- EMEC: Marine Energy and Energy
- System/Hydrogen Demonstration development (incl ReFLEX)
- WES Novel Wave Energy Converters sea trials at EMEC
- OIC Ports Masterplan
- Sustainable Aviation Test Environment (SATE) led by HIAL
- Orkney Research and Innovation Campus
- Case for Interconnector continues

Shetland

- Viking Wind Farm (103 turbine, 443 MW) under construction
- Shetland Islands Interconnector (600MW HVDC link) under construction
- ORION – ambitious energy transition project
- Ultra Deepwater Port at Dales Voe – proposed UK site for decommissioning
- Nova Innovation tidal array

Caithness and Sutherland

- Wick Harbour – O&M base and "beating heart" of Beatrice Offshore Wind Ltd
- SIMEC Atlantis' MeyGen tidal array (4 turbine as precursor to 86MW)
- Floating Wind demonstration, Dounreay proposals

Outer Hebrides

- Stornoway deep water port development
- Arnish Fabrication facility
- Outer Hebrides Hydrogen Hub
- Case for interconnector continues

Moray

- Decarbonisation across food and drink and textile sectors
- Highland Hydrogen Highway – early concept under development

Lochaber, Skye and Wester Ross

- Fort William 2040 Masterplan (include proposals for low carbon heat)
- SSE's Coire Glas Pumped Hydro Scheme (1500MW, £1bn development) consented
- Alvance Aluminium Smelter – world's first "green steel" manufacturer
- Kishorn Port & Dry dock active and servicing offshore contracts

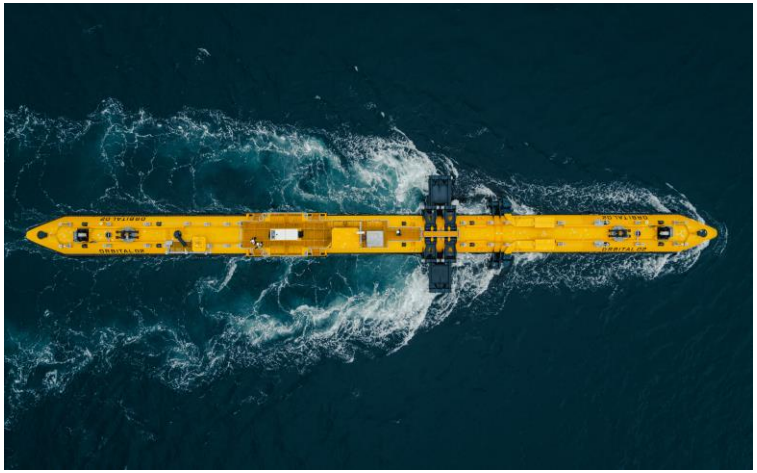
Inner Moray Firth

- Opportunity Cromarty Firth (including Power House, North of Scotland Hydrogen Project, and Advanced Manufacturing for offshore wind proposals)
- Nigg Energy Park and Port of Cromarty Firth – offshore wind marshalling and construction hubs for Moray East and Seagreen wind farms

Argyll and the Islands

- Islay Energy Strategy
- Potential H100 Demonstrator (following SGN's Levenmouth demonstrator)
- Nova Innovation's Oran na Mara proposal
- Coordinated distillery decarbonisation (Islay)

Renewable Energy in the Highlands and Islands



Offshore Wind

Conservative analysis - creation of 4,000 direct FTEs to 2032

Long-term, sustainable operational offshore wind roles in the Highlands and Islands in addition, major construction employment impacts.

Multipliers on manufacturing roles may be substantially higher than the norm depending on the source of input materials.

Unique opportunity for the Highlands and Islands

Ideal geography. The primary contributor to achieving Net Zero by 2045, providing major economic opportunities in manufacturing, marshalling, construction and O&M

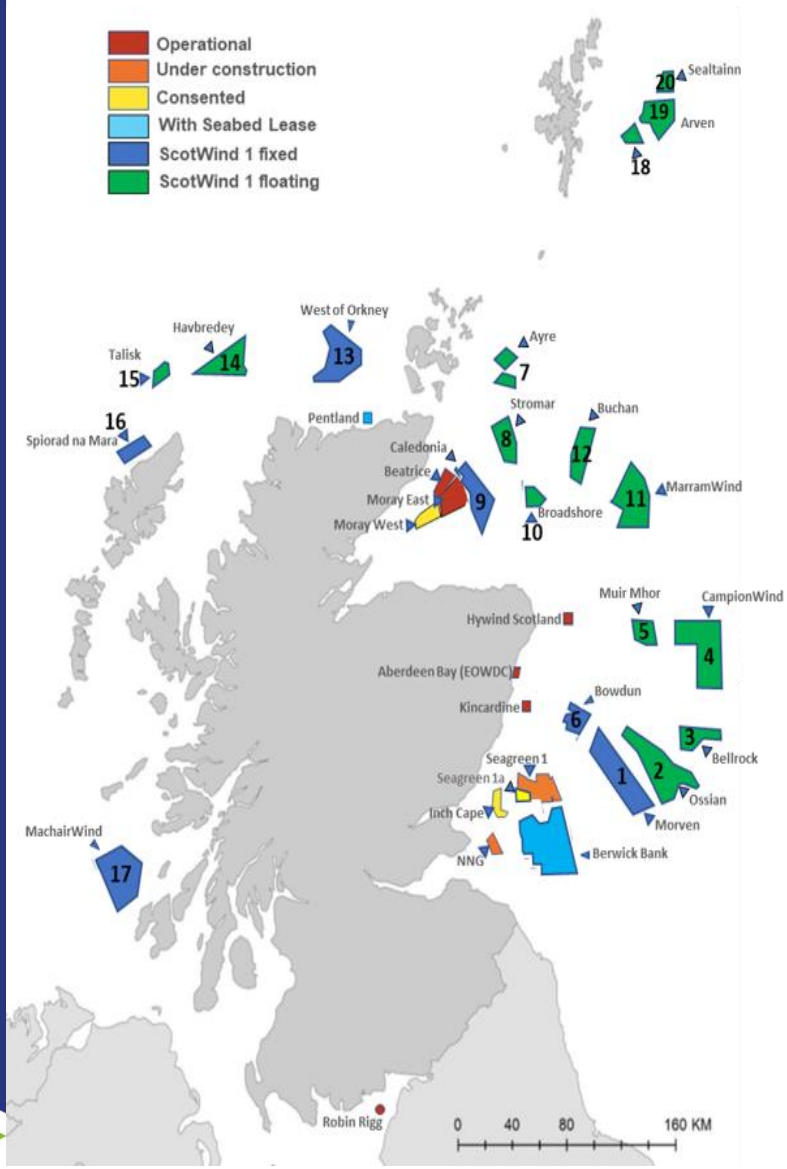
Delivers across Scottish Government key policies

Just Transition to Net Zero, Blue Economy, Manufacturing Recovery Plan, Jobs Mission, Population and Talent Attraction and Retention, Place, Innovation, Youth and Fair Work

Delivers high-value jobs in remote, rural and coastal communities

Significant contributor to areas in population decline and requiring diversification and increasing incomes

Offshore Wind



ScotWind

SITE	DEVELOPER	CAPACITY
1	BP and EnBW	2907MW
2	SSE Renewables, CIP and Marubeni	3610MW
3	Renantis and BlueFloat Energy	1200MW
4	ScottishPower Renewables and Shell	2000MW
5	Vattenfall and Fred Olsen Renewables	798MW
6	Thistle Wind Partners	1008MW
7	Thistle Wind Partners	1008MW
8	Renantis, Orsted, BlueFloat Energy	1000MW
9	Ocean Winds	2000MW
10	Renantis and BlueFloat Energy	900MW
11	ScottishPower Renewables and Shell	3000MW
12	Floating Energy Allyance	960MW
13	RIDG, Corio Generation and TotalEnergies	2000MW
14	Northland Power	1500MW
15	Magnora ASA and Technip UK	495MW
16	Northland Power	840MW
17	ScottishPower Renewables	2000MW
18	Ocean Winds	500MW
19	Mainstream RP/Ocean Wind	1800MW
20	ESB Asset Development	500MW

Scottish current projects

SITE	DEVELOPER	CAPACITY
Robin Rigg	RWE Renewables	174MW
Hywind Scotland	Equinor	30MW
Aberdeen Bay	Vattenfall	93MW
Beatrice	SSE/Red Rock Power	588MW
Kincardine FOW	Cobra/Pilot Offshore	48MW
Moray East	Ocean Winds	950MW
NNG	EDF Renewables and ESB	448MW
Seagreen 1	SSE Renewables and TotalEnergies	1140MW
Seagreen 1a	SSE Renewables and TotalEnergies	420MW
Inch Cape	Red Rock Power	1080MW
Moray West	Ocean Winds	850MW
Berwick Bank	SSE Renewables	4150MW
Pentland FOW	Copenhagen Infrastructure Partners	100MW

ENERGY INFRASTRUCTURE INVESTMENTS IN THE HIGHLANDS AND ISLANDS SINCE 2010

Total Investment

including HIE, Other Public Sector & Private funding:

£270.8m

Shetland

Lerwick Port Authority: Dales Voe South - Decommissioning Centre of Excellence and Decommissioning Pad

HIE funding: £2.88m

Private funding: £11.54m

Orkney

Orkney Islands Council: 3 Port Strategy - Developments at Lyness, Hatston and Stromness

Other public funding: £20m

Outer Hebrides

Stornoway Port Authority: Phase 1 Harbour Developments, Newton Basin and Deep Water Port

HIE funding: £13.62m

Other public funding: £26.57m

Private funding: £20.95m

Arnish Fabrication Yard: Site Developments and Improvements

HIE funding: £8.36m

Other public funding: £995k

Caithness and Sutherland

Scrabster Harbour Trust: Marine Renewables Infrastructure Phase 1A Pier Development and St Ola Pier Redevelopment

HIE funding: £ 11.12m

Other public funding: £10m

Private: £17.10m

Wick Harbour Authority: Heavy Lift Pad at Commercial Quay

HIE funding: £237k

Other public funding: £250k

Private funding: £355k

Lochaber, Skye and Wester Ross

Kishorn Port Ltd: Dry Dock Upgrades and Gate Anchors

HIE funding: £709k

Private funding: £658k

Inner Moray Firth

Port of Cromarty Firth: Phase 3 & 4 developments

HIE funding: £11.95m

Private: £39.82m

Global Energy Group: Post-acquisition and phase 2 developments

HIE funding: £9.1m

Other public funding: £600k

Private funding: £51.2m

Port of Ardersier: Consenting for the Ardersier Yard

HIE funding: £723k

Argyll and the Islands

Argyll & Bute Council: Renewables Hub at Campbeltown

Other public funding: £12m

Green Hydrogen

Initial creation of 600 direct, green, fair, high value FTEs in region

Based on a small number of ScotWind projects going straight to hydrogen production, with significant wider opportunities for Scotland from balance of plant and export potential.

Multipliers may be more akin to petrochemicals and potential for Scotland to export cost-effective green hydrogen to satisfy European energy transition demand

Unique opportunity for the Highlands and Islands

Ideal geography. High offshore wind resource, constrained route to market (expensive electricity grid) and existing enabling infrastructure (O&G terminals) will drive early investment in green hydrogen production at scale

Delivers across Scottish Government key policies

Just Transition to Net Zero, Hydrogen Action Plan, Jobs Mission, Population and Talent Attraction and Retention, Place, Innovation and Fair Work

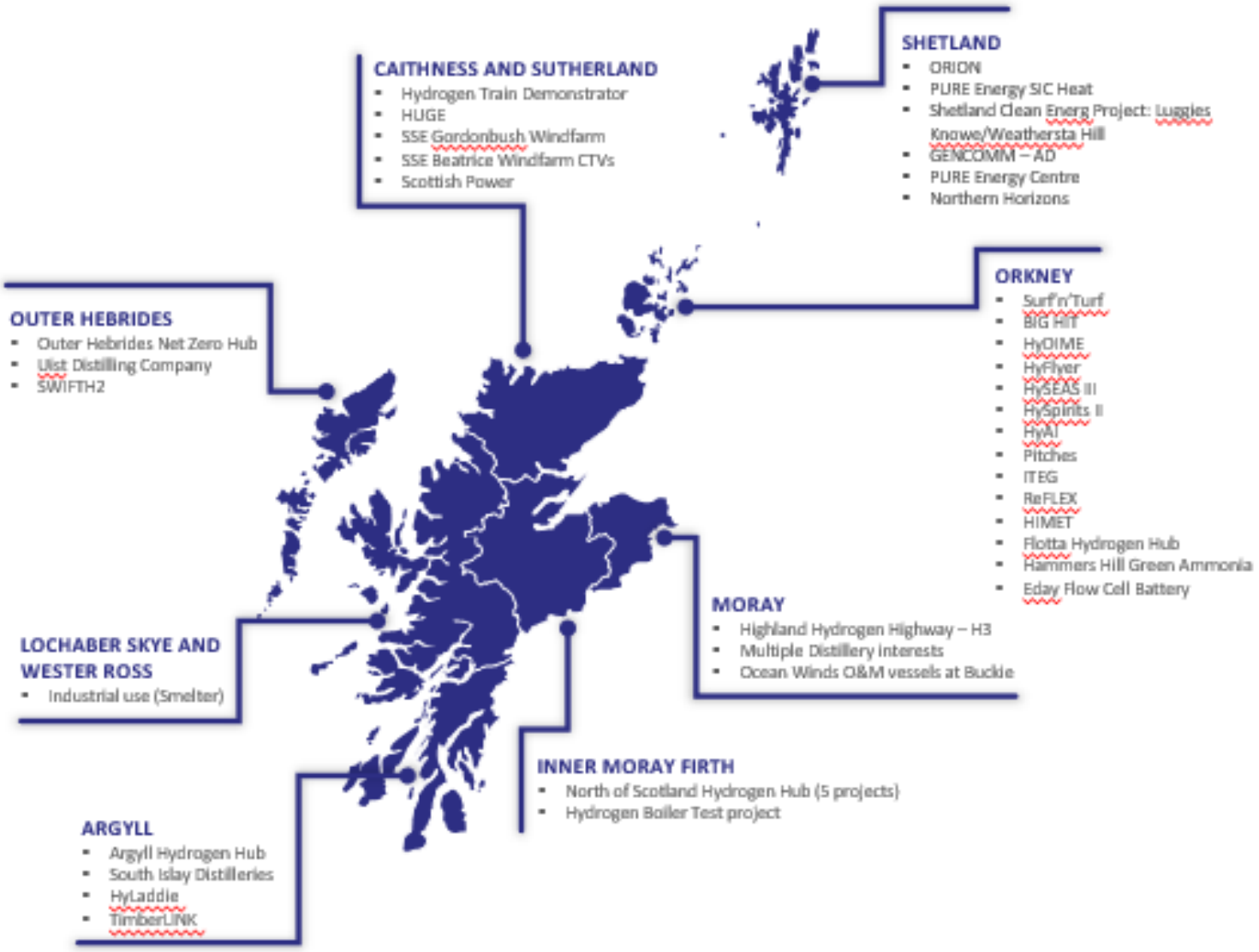
Delivers high-value jobs in remote, rural and coastal communities

Creating value adding industrial activity adjacent to the resource

Repurpose/diversify

Oil and gas terminals at Sullom Voe, Flotta and Nigg as initial investments, Stornoway, Moray and other locations to follow.

Hydrogen Projects



Marine Energy

- CfD for Tidal Energy – new opportunities for manufacture and project development
- Wave Energy Scotland – commercialisation phase and synergies with Floating Wind
- Marine Energy Policy Position – as member of Scottish Marine Energy Delivery Group

Q&A

Elain MacRae
Head of Energy Strategy

elain.macrae@hient.co.uk