

RENEWABLE ENERGY SUPPLY CHAIN CONFERENCE 2025 13 MARCH | ABERDEEN

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The green industrial revolution lessons learned so far

Chaired by Alwyn Poulter, Market Development, Hitachi Energy





Alwyn Poulter Market Development, Hitachi Energy

Chris Milne Chief Financial Officer, Orbital Marine Power

> Paul Colebourn Agent, RJ McLeod

Andy Lyle Director, Locogen

Kareen French O&M Package Manager, Vattenfall





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Investment Fireside Chat with National Wealth Fund

Chaired by Claire Mack, Chief Executive, Scottish Renewables







Claire Mack Chief Executive, Scottish Renewables

Nathalie Haller

Director, Banking and Investments, National Wealth Fund







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Showcasing supply chain success

Chaired by David Rennie, Head of Energy Transition, Scottish Enterprise





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Rosalind Hart Co-Founder Quoceant



Innovation Offshore

Scottish Renewables Renewable Energy Supply Chain Conference 2025



Experts in Offshore Renewables & Technology Innovation

- 10-year track record, located near Edinburgh
- Team of 12 with multi-disciplinary engineering expertise
- Founders each have over 2 decades of experience
- Offshore wind fixed and floating, tidal, wave and heat storage



Renewables Activity

Engineering Design

- Primary & secondary structures
- Temporary works
- Client Rep/Owner's Engineer
- Fabrication drawings
- Design review

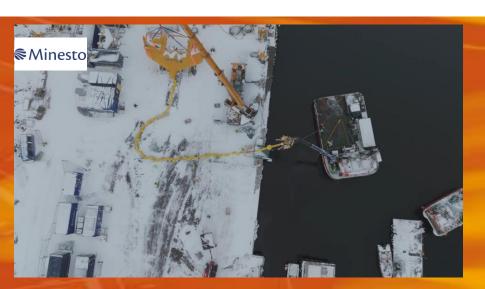
Modelling and Simulation

- Structural analysis & optimisation
- OrcaFlex analysis
- Finite Element Analysis
- Systems and control
- Accidental loading

Marine Operations Support

- Storyboarding
- Marine connection systems
- Temporary tooling design
- O&M effectiveness modelling
- Hydrodynamics





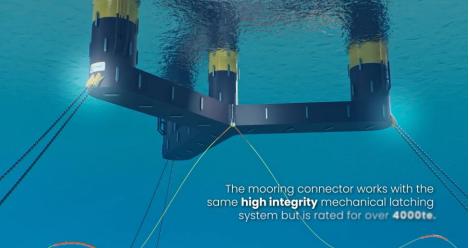


Technology Innovation: Q-Connect



A family of connectors to provides rapid connection and disconnection of moorings and subsea cables

- Simple pull-to-connect
- Enables tow-to-harbour maintenance
- Reduces installation time & increases safety
 - Reduces cable replacement costs.





Contact Us

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Euan Marjoribanks Managing Director Ternan Energy

Scottish Renewables Renewable Energy Supply Chain Conference

Showcasing Supply Chain Success





5 Offices in the UK

HQ in Aberdeen

20+ Staff

Geotechnics Geophysics Geomorphology Geology GIS



6500+

Total Client Rep Days Supported 350+ Projects delivered 30+

Countries delivered work in

VISION

Become the leading integrated marine geoscience consultancy for the energy sector



Help our clients understand, manage & mitigate the seabed risks for their projects



PURPOSE

Enable delivery of the energy transition

PENTLAND FLOATING OFFSHORE WIND FARM

Site Investigation Package Management

Cable Burial Risk Assessment (CBRA)

moraywest

MORECAMBE

Integrated Ground Model Development





Aggie Georgiopoulou Geoscience Manager







Science and Technology Facilities Council

Hartree Centre North East Hub



Great minds coming together to discuss offshore wind



Get in touch

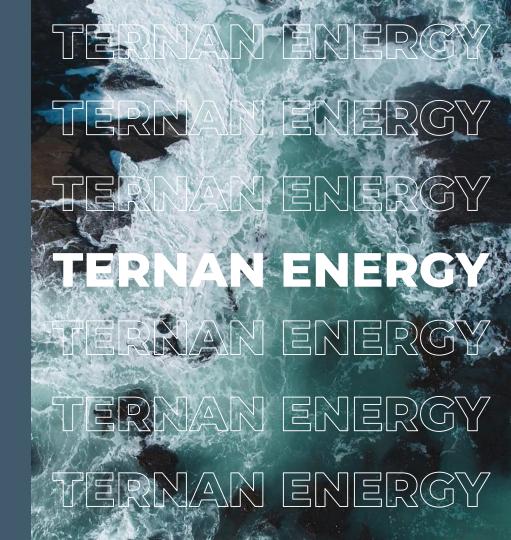
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info@ternan-energy

←+44 1224 013669

https://www.linkedin.com/company/ternan-energy/







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Francis Mahon Mora Business Development Representative Perceptual Robotics



Delivering Intelligent Automation

FRANCIS MAHON MORA, BUSINESS DEVELOPMENT REPRESENTATIVE

COMPANY OVERVIEW



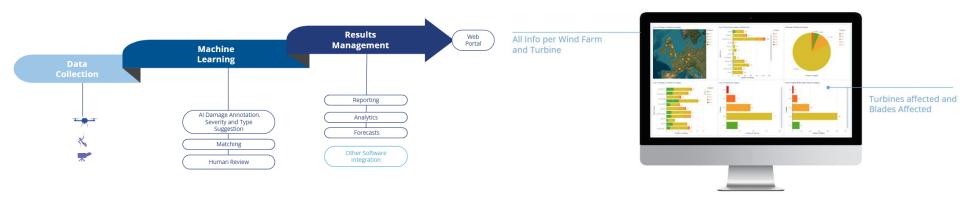


Impactful Technology Rigour & Integrity Safety & Professionalism Customer focused











PO007 Comparing Blade Specialist Expertise to Al in Wind Turkine Blade Inspections

Al assisted blade experts achieve the best damage detection performance



Case Study - Better Detections

Together with a large owner operator we demonstrated that our machine learning with their blade experts improved the detection rate of defects.

This allowed them to repair damages earlier than they otherwise would have - saving them £1300 per turbine.

Key Benefits

- Cost savings of £1300 per turbine
 Reducing blade expert time
- Service contract of £100,000 return £3,343,860

There is no doubt that the technology can have a massive impact on the future cost of turbine terpairs" Major Owner

Case Study - New Business

A repair service provider purchased a Dhalion system in 2022. They previously did not do blade inspections or repairs.

The new offering allowed them to engage with 7 new customers inspecting over 150 turbines. More importantly they secured repair work and full service agreements for the majority of these.

Key Benefits
 New business

Blade Exper

100%

88%

84%

Cat 1-5 84%

Cat 5

Cat 4

Cat 3

Expert + ML

100%

100%

92%

93%



"Dhalion provides accurate damage reports faster, allowing us to get more business and increase our credibility as an ISP "

Repair Company Business Manager

Case Study - Faster Inspections

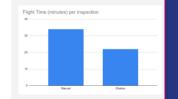
An inspection and repair service provider conduct c.100 inspections per year.

They previously completed inspections with manual drones. In 2022, they integrated our Dhalion Al technology, which enabled them a fully automated drone inspection service.

Key Benefits

- Cost savings of £110 per inspection/ £11,000 per
- Reduced inspection time
- Improved data consistency

"It takes me now the same time to inspect a turbine as it used to be just for one blade "



MIMRee Project

Autonomous Offshore Wind Farm Inspection Project

ORE Catapult Launch Academy

Case Study - Accountability

2022-2023: Owner wanting OEM to improve their work

- Simple training and in-house use
- Able to complete inspections themselves and review to their standards
- Generate report and background to submit to OEM for discussion on priority repair actions and state of turbine
- Repairs done faster by OEM and with owner priorities
- Owner has full access to blade status and images and can inspect anytime as needed

"With Dhalion, we are able to leverage the benefits of in-house inspections and assume full control of our fleet's health"

Repair Company Pilot



Thank you

www.perceptual-robotics.com

francis.mora@perceptual-robotics.com



SESSION SPONSOR



Laura Jones Business Development Manager Acrow Global



SESSION SPONSOR



Chloe Giles Sales and Marketing Executive Pier Solutions



Leading the Energy Transition with Engineered Modular Solutions & Services





Facility & Premises

Location:

- Kintore, Aberdeenshire Facility Size:
- 4047 m² total
- Integrated corporate and engineering offices – 360m²
- Modern workshop equipped with overhead lifting cranes – 555m²
- Capable of handling a wide variety of modules and bespoke structures

Yard Space:

- Expansive area for efficient storage of client equipment – 3132m²
- Safe and secure, monitored by state-of-the-art CCTV

Additional Facility:

 Fabrication facility located in Dundee to support manufacturing

Our Vision

A modern, sustainable and integrated energy infrastructure is a jigsaw of different solutions. We will develop an eco-system of global partnerships to help deliver that.

Our Mission

To accelerate the deployment of a modern, sustainable and integrated energy infrastructure, both on & off-grid, and which serves community, commercial and industrial needs.

Our Values

Best in class delivery, to the highest standards of **safety, quality and collaboration,** and in-line with our clients needs.



Who Are We?

- Leading modular and electrical services provider
- Modern approach to engineered solutions
- Expertise in **bespoke** projects from conceptual design to completion
- In house design and engineering team

Our Offering:

- Bespoke engineered modular solutions
- 3D Modelling Complete structural, architectural and electrical packages inclusive of all component detail
- Complete structural analysis covering all load scenarios in line with stringent codes and standards.
 - Reactive site inspection services
- Comprehensive capabilities supply of lifting, manual handling, and material handling products

CASE STUDY

- Pier were awarded a first time scope from a new client to supply two 20 x 8FT CSC workshop containers, modified to suit both a clean and dirty workshop.
- The containers were engineered and designed in full 3D format covering all structural, architectural and electrical outfitting allowing for accurate and detailed drawings to assist client approvals.
- Pier provided a full plug and play solution with all disciplines included covering fabrication, non-destructive testing, painting and complete outfitting.





V-TES





- In Q2 of 2024, Pier Solutions acquired electrical engineering businesses, V-TES and V-TES Renewables.
- The acquisition of a specialist provider of electrical engineering services and equipment will further empower Pier Solutions to meet the evolving needs of our customers both onshore and offshore.
- High Voltage (HV) Termination and Testing (up to 132kV)
- High Voltage/Low Voltage (HV/LV) Switchgear
- Rope Access Solutions
- Thermal Imaging Zone 1 & Safe Area
- Fibre Optics
- Energy Storage
- Harmonic Surveys
- TDR & OTDR Cable testing & analysing
- Hazardous Areas
- Electrical Engineering

- In 2024, we formed a strategic partnership with H2scan, a global leader in advanced hydrogen sensing technologies.
- The partnership leverages California-based H2scan's extensive experience in developing state-of-the-art sensing technology and Pier Solutions deep engagement and experience of hydrogen applications within the wider energy transition arena.
- These applications include fuel cells, electrolysers, hydrogen storage, hydrogen production, area safety monitoring and blending and distribution systems.



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Paul Mudd Business Development Director TRS Workforce Solutions

COMPANY OVERVIEW





TRS Staffing Solutions: 40 Years TRS Workforce Solutions: 3 Years Spend Under Management (SUM): \$378m

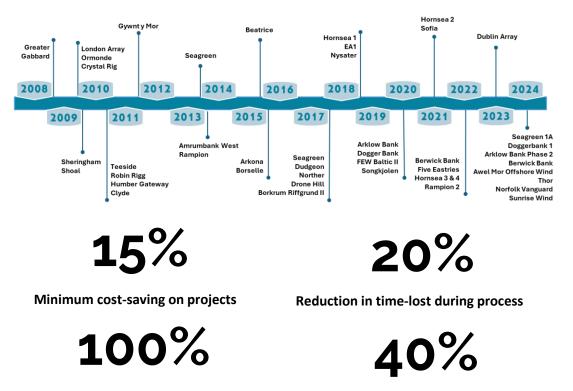
TRS Workforce Solutions is a Managed Service Provider, a segment of the process outsourcing industry, taking responsibility for managing contingent workforce program.

- Program Management
- Reporting and tracking
- Supplier selection and management
- Order distribution
- Consolidated billing

Managed Service Provision Resource Process Outsourcing Total Workforce Management Hybrid & Blended Models

Specific offering to offshore wind:

One Project | One Supplier | One Solution



Fulfilment through supplier & Direct

Reduced Time-to-fill on critical hires

Development of industry leading project-based supplier model

- Quick-to-deploy
- Flexible Delivery
- Award-winning management system
- Latest Market
 Analysis tools

STEM Returners

Skills for a Sustainable Skyline

Green Skills Taskforce

Council-led Bootcamps

Supporting ESG Outcomes, particularly around Social Value and reporting through enhanced supplier audit, town halls and collaborative skills mobility



Managing Talent

Thank you

Paul Mudd Business Development Director paul.mudd@trswfs.com www.trswfs.com 07496958540



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Kate Rudman Wind Solutions Director Tarmac



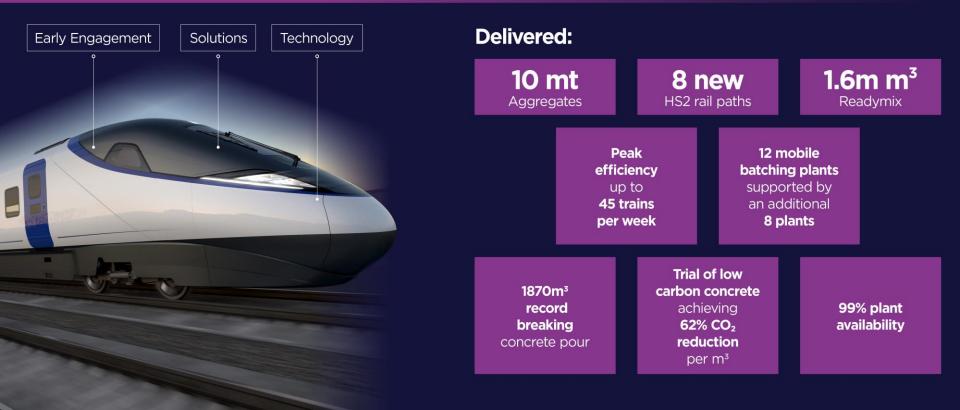
Early Engagement with the supply chain

Kate Rudman Tarmac Wind Solutions Director

March 13th, 2025 Scottish Renewables' Renewable Energy Supply Chain Conference

LEARNINGS FROM EARLY ENGAGEMENT WITH THE SUPPLY CHAIN – HS2

HS2







CRH

The leading provider of building materials solutions that build, connect and improve our World.

29 Countries

35bn Revenue

78k People globally

WHY EARLY ENGAGEMENT WITH SUPPLY CHAIN – IMPORTANT IN OSW



Collaboration

Alignment

- Shared understanding of risk
- · Definition and management of critical path
- Alignment in goals and priorities
- Cost surety
- Schedule surety / timings
- Risk mitigation / resilience
- Planning
- One Team / people
- Systems, processes, baselining, tracking

What Tarmac	
can help with	

Technical

Logistics

Sustainability

Circularity

Social Value

To support our social value commitments, we have developed four focus pillars;

Supporting local economies Community wellbeing Environmental sustainability Inclusion & diversity

They provide the structure and focus we need to turn our vision into meaningful action.

It is through shared efforts that we can maximise the reach and impact of social value.

Kate Rudman Tarmac Wind Solutions Director

March 13th, 2025 Scottish Renewables' Renewable Energy Supply Chain Conference

nank

Whitelee Windfarm: Tarmac supply of specialist materials The objective was to find a locally sourced cementitious solution and a sustainable product with lower embodied CO² for a construction project focused on providing renewable energy. The product also had to be suitable for large concrete pours required for the foundations and bases of 215 wind turbines on the 5,300 hectare site, an area roughly the size of Aberdeen.



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Energy gateways – where land meets sea

Chaired by Sophie Pacitti, Supply Chain Officer – Stakeholder Engagement, Scottish Renewables

#SRSUPPLYCHAIN25





Ryan Maclean Executive Director Scrabster Harbour Trust



Scrabster Harbour

Enabling Scotland's Renewable Future

Ryan Maclean

Executive Director

Scrabster Harbour Trust



Scrabster's Evolution – Past to Present

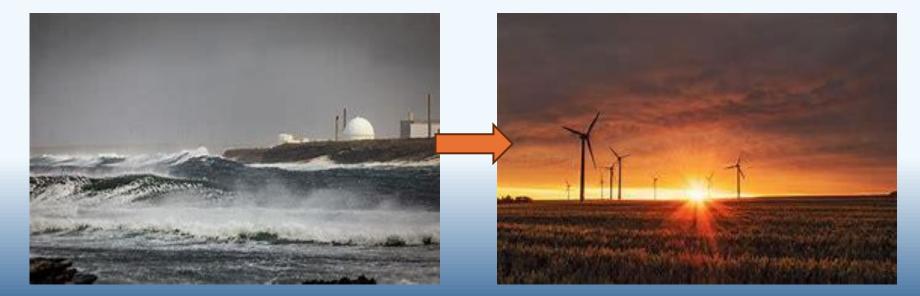




Caithness' Pioneering Energy Role

Dounreay – The UK's First Nuclear Fast Reactor

Caithness – The Powerhouse of Onshore Wind





Infrastructure Investment

- Jubilee Quay Completed in 2013 adding over 300m of quayside
- Heavy lift capacity and 8000m2 of laydown
- Fuel & shore power

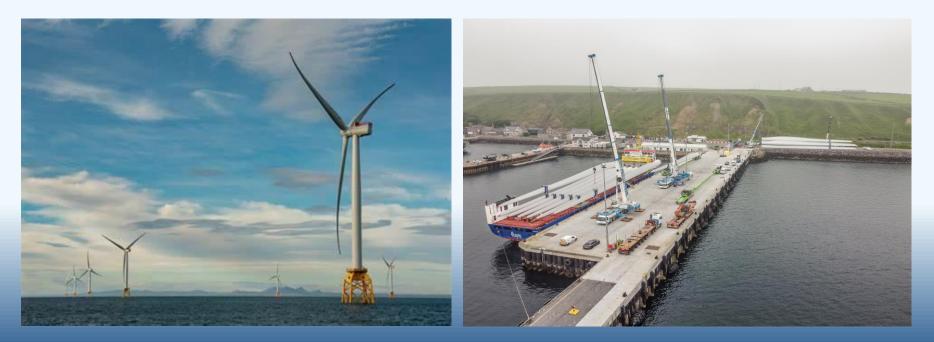




- The new St Ola Peir Opened in 2021
- Capable of handling vessels up to 250m
- Minimum alongside berth of 9m

Collaborating For The Future





Scrabster: Supporting Scotland's Renewable Future

www.scrabster.co.uk





Kieran Morton Business Development Manager Port of Aberdeen



Energy Gateways: Where the land meets the sea

Kieran Morton Business Development Manager

13th March 2025







'Scotland's premier port facility, at the heart of the Energy capital' Oldest business in UK Est 1136 Port of Aberdeen is a Trust Port Largest & busiest port in Scotland

World-class supply chain on our doorstep

Unique transport links via Sea, Rail, Road & Air

North Harbour



The perfect offshore wind O&M Hub

5.9KM of Quayside

Extensive warehousing & offices Tankage, Laydown area & storage Quayside depth up to 9.3m Unrivalled transport links & parking

Strike on

South Harbour

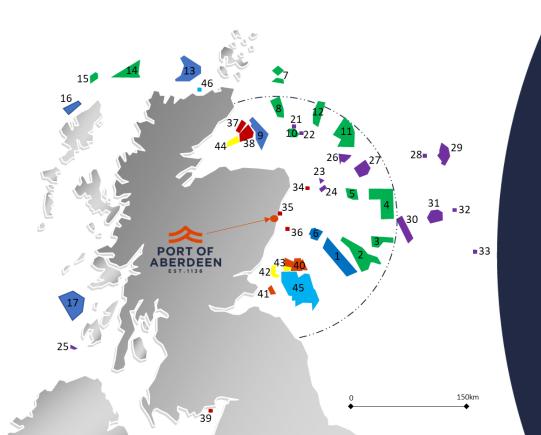


The Offshore wind construction & maintenance support Superport

£420million investment project **13.9 Hectares of quayside storage** 25.2 additional adjacent hectares Quayside Depth of -10.5m (LAT) Dredging down to -14.5m **1.5km of Deep-Water Quay** 165m Channel Width Vessel Size up to 300m Up to 77 ton/m2 heavy lifting Less weather downtime 24/7 unrestricted access / working Unrivalled local supply chain

Offshore Wind







74%

of all future windfarms in Scottish waters with 150km

94%

of INTOG – PoA the closest port capable of floating Integration

49%

of Scotwind – PoA the closest port capable of delivering project

54% (17.9GW)

Of future windfarms – PoA is the closet port to deliver large scale projects

Supply Chain Opportunities







Thank you

www.portofaberdeen.co.uk

01224 597000

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Sinclair Browne Chief Executive Port of Inverness

- Operates as a Trust Port Act of Parliament 1847
- Over 200 ship visits annually

- Renewable energy hub
- 350+ complete wind turbines over last ten years
- Founding member of the Inverness and Cromarty Firth Green Freeport



Port of

 $\langle \cdot \rangle$

ARCTIC ROCK

Transforming the Highland Economy and Delivering National Energy Security

WATERFRONT LANDHOLDING

- Total 38 hectare approximately
- Phased development
- Both sides of Kessock Bridge
- Capable of extending with adjoining landholders



HARBOUR GAIT PHASE 1:

- 8-hectare site consenting process underway
- Extensive laydown space
- New 150m quay
- Facilitate transhipment to smaller vessels
- Blue economy hub



NORTH CITADEL QUAY

- Maritime manufacturing/repair/transhipment hub
- 100m quay and 1-hectare site
- Dedicated boat hoist
- Alternative marine fuels facility
 - Potential smaller cargo vessel berth



UPPER HARBOUR: SHORE STREET QUAY

- Office accommodation Green Freeport related
- EV bus terminal
- Public charge points
- Blue economy hub



OTHER IMPROVEMENTS

- New entrance complete by 2025, 90m long abnormal loads
- Main quay resurfacing incorporating shore power capability
- Phased upgrading of existing transit sheds
- Further infill land available 15/20 hectares





NET ZERO

- Net Zero by 2038
- Monitoring carbon generation
- Transitioned port fleet to EV
- Pilot boat replacement plan
- Alternative fuels for pilot boats
- Shore power programme
- Further development of onsite renewable energy provision



Sinclair Browne Chief Executive 01463 715715 sinclair@portofinverness.co.uk www.portofinverness.co.uk

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ALE A SMARTER, SAFER, STRONGER



WWW.ALE-HEAVYLIFT.COM





Christine Bell Chief Executive Eyemouth Harbour Trust

Eyemouth Harbour

Gateway for Sustainable Growth in the South of Scotland

Christine Bell, Chief Executive 13 March 2025



https://f.io/bBkUJkTy



RENEWABLE ENERGY SUPPLY CHAIN CONFERENCE 2025



Eyemouth Harbour – Background

Governance

Trust Port – Stakeholder Model

Mission

Purpose to maintain, preserve and improve Eyemouth Harbour for the benefit of stakeholders and the local community; whilst creating an important socioeconomic legacy for East Berwickshire.

Heritage

A natural harbour at Eyemouth with records of a Harbour Master dating back to $13^{\rm th}\,c.$

Infrastructure

First built pier in 1747, further developed in 1790s, 1880s, 1960s and 1990s. 2024 will develop a Port Masterplan, with potential expansion.

Ownership

A Statutory Harbour Authority formed in 1797 by an Act of Parliament, with revisions in 1882, 1920 & 2021

Economic Change

A fishing harbour until mid-2000s, then increasingly popular with leisure craft. In 2023, an offshore wind O&M base for NnG.

EYEMOUTH	THE PRIOR AND MONKS OF COLDINGHAND TWO TOFTS OF LAND"AT EIEMUTHE".
1	1214 Habour Master John Kinghom was summaned to oppear in the court in Ayton to answer a charge of exacting "O pervise more than was due for the anchorage of a step or Eyemouth".
1747 The first artificial improvement to the includur carrier in 1727 when William Crave of Netherboyes built what was known as the Old Per.	
1769 Smeaton 's Per was begun and complete din	1767 The Old Pier was destroyed by a great storm after only twenty years.
073. The whole cost was £2,00	1797 The Harbour Trust was formed.
1881 October 14th, 1011 also Innova na Black Holps a a day stahed into Sysaman'in Astarty, 107 ma were silled in a harrissan (many in stear of their loved ones on the show) which devested the Bencickilar Coarts Communities in a single	
alternoor.	■ 1885 The horbour improvement work started in 1885 and was completed in 1887, the basin of the harbour being deepened about two feet. While its area was was extended to 9 ¹⁰ acres.
1892/3 Further work took place and this is when the entrance to the harboar was despend about 5 feet and improvement made the gay walls.	1982
1993	BOZ A deep water basin and rew harbour entrance were proposed, which would have cost over £17mflion. This become opparent that the original proposal was too expensive.
A revised proposal was put forward to deepen the existing entrance and to exocute a new deep water basin below Genegreen Hosae, at a cost of just less than EAmilton.	1997 - 1999
2000 The new fahmaket was completed and opened in March 2000.	Work on the new harbour strated in 1997 and was completed in 1999. The new Counsegrees Basish was operated by H.R.H. The Prince of Wales on 9th June 1999.
	2021 In 2021 the construction of the operation and maintenance base for Neart no Gaoithe (NNG) attishore wind farm.

THE FARLIEST MENTION OF EVENOUTH IS I

A BRIEF HISTORY OF

OSW O&M Base

- Successful £10m inward investment in harbour (buildings and pontoons), and support for NnG O&M facility
- Fundamental role of Eyemouth Harbour with operations in local and regional supply chains and wider job creation
- A critical focus for the Regional Economic Partnership for the South of Scotland
- Catalyst for ancillary activities to support construction and O&M
- Currently over 100 people working directly on the NnG project at Eyemouth.



Drivers for change

Local

- Diminishing revenue
- Spare space and capacity
- V4E and need for regeneration

Regional

- Establishment of SOSE (2019)
- SoS Regional Economic Strategy (2021)
- SBC LDP (2024)
- SoS NZ Investment Prospectus (2023)

National

- SG and UK Gov economic and energy policy
- SOWEC (and ScotWind leasing round and SIA and SIM)

International

- Focus and investment in offshore wind
- Growth & opportunities in wider blue / marine economy





西谷台血尽令行









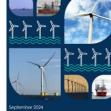


wind

Marine Delivery Routemap

Routemap owards a shared vision for ur seabed and coastline

Marine Delivery



Offshore Wind Focus

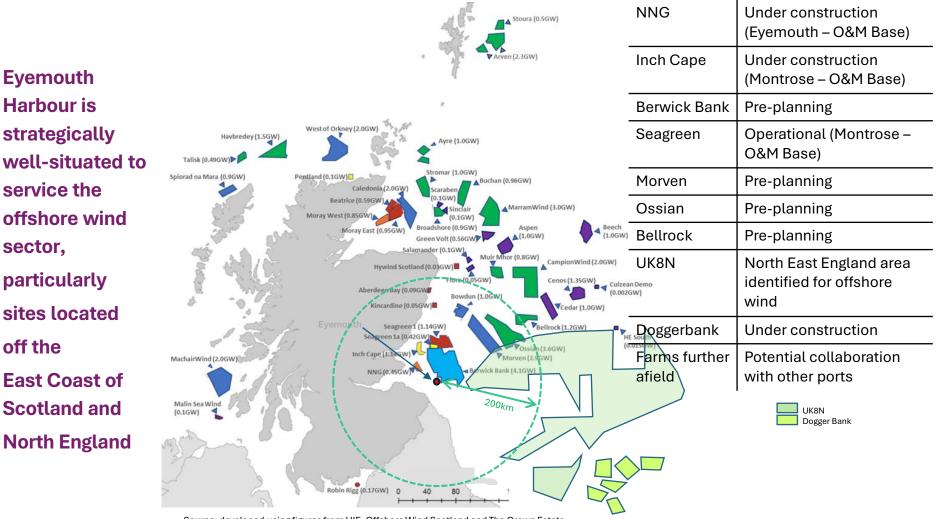
Scottish Government

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Scottish Governme







Source: developed using figures from HIE, Offshore Wind Scotland and The Crown Estate.





For further information, contact:

Christine Bell <u>ceo@eyemouth-harbour.co.uk</u>

t: 018907 52494





proud members of:

















Iain Sinclair Executive Director Global Energy Group



Leading **integrated** energy **supply chain** and **infrastructure** service provider.

Iain Sinclair | 13.03.2025

Global Energy Group

Global Energy Group is the UK's leading integrated energy supply chain & infrastructure service providers, and owners and operators of the Port of Nigg.

Our vision is to be the UK's energy transition partner of choice, through the provision of world class port infrastructure, innovation and integrated engineering service solutions.



FABRICATION



PORT





ENGINEERING

apollo

CRANES & LOGISTICS

O&M / IRM





PORT SERVICES









Port of Nigg

PORT OF

Located in the sheltered deep-water boundaries of the Cromarty Firth, the Port of Nigg is strategically positioned in close proximity to a number of **ScotWind & INTOG** sites.

Over **£120m** has been invested into the facility's ongoing redevelopment, aligned to our vision to transform Nigg into an offshore wind "**Superhub**".

Green Freeport status was awarded in 2023 by the UK and Scottish Governments, as part of the Inverness & Cromarty Firth Green Freeport.

36,000

fabrication workspace

750k

m2 of storage and laydown 50 mt/m2 ground bearing capacity

12

water depth

below CD

GW Offshore Wind Assets Managed

3.5

120 tonne crane with

tonne crane with 35m hook height

metres of deepwater quayside

1,200

minute transit time to open sea

15







Track Record & Capabiltiies

The Port of Nigg has four consecutive offshore wind projects since 2018, amount to over 3.5GW of assets being managed.

- 2018/19 Beatrice Offshore Wind Farm
- 2019/21 Moray East Offshore Wind Farm
- 2021/23 Seagreen Offshore Wind Farm
- 2023/24 Moray West Offshore Wind Farm

The scope of works undertaken by Global Energy Group and the Port of Nigg include:

Land Lease

- Marshalling & Logistics
- Craneage
- Sea-Fastening Works
- Ships Agency Supply
- Fabrication
- Inspection, Repair & Remedial Works
- Plant & Labour
- Quayside Services











© HIE







Latest Activity

Customs Site Status Awarded

As part of the Inverness & Cromarty Firth Green Freeport, the Port of Nigg has been awarded Customs Site status by HMRC.

Infrastructure Development

Marine Licence for construction of the Eastern Inner Dock Quay at the Port of Nigg has been granted.

Sumitomo Electric Ltd. - HVDC Subsea Cable Manufacturing Facility First batch of structural steel erected onsite and ground works well underway.

Nigg Oil Terminal

Decommissioning of the Nigg Oil Terminal by Repsol is progressing well. The site will be returned to Global Energy Group in 2026.









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The inside track – offshore wind opportunities straight from the source

Chaired by Emma Harrick, Director of Energy Transition and Supply Chain, Scottish Renewables and The Clean Energy Cluster







Neil Douglas Director BVG Associates



Offshore wind opportunities: A local and global overview

Scottish Renewables' Renewable Energy Supply Chain Conference Aberdeen, 13th March 2025





Content

- Scottish project pipeline
- UK project pipeline
- Long-term global capacity forecast
- Observations of key success factors for suppliers



GAssociates

89

BVG Associates: delivering strategy-defining insights

Deep industry understanding where market, economics and technology overlap









Trusted by over 400 clients globally



Over 1300 client projects delivered



Over 80 landmark oublications



Consultants with over 200 years of combined ndustry experience





Industry building

Market roadmaps and visions Energy strategy, policy and framework development and deliverv Sector deals

Marine spatial planning Supply chain and skills development



Auctions and economics

Bid strategy and competitor analysis

Bid drafting and review

Jobs, local economic benefit, and non-price factors

Cost of energy: future, spatial, new technology, site finding



Business strategy

Market and technology strategy

Supply chain strategy

Operations, maintenance and service strategy

Market intelligence

Education



Supported by our proprietary, industry-leading models and research including: LCOE model · Jobs and economic benefits model · Spatial planning tools Innovation LCOE impact model · Market intelligence tool

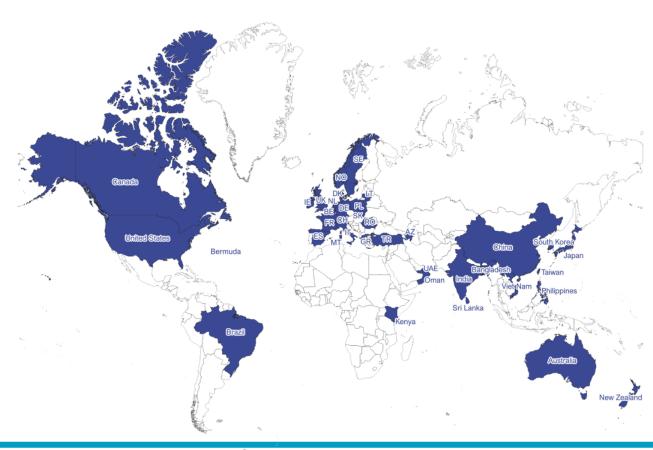




Global presence

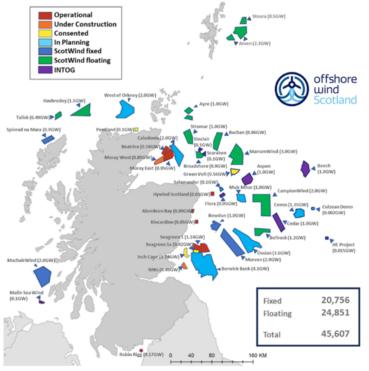
We work

- With all the top 10 offshore wind project developers
- In all the top 10 offshore wind markets
- On projects, so far, with a total capacity 43 GW





Scottish project pipeline



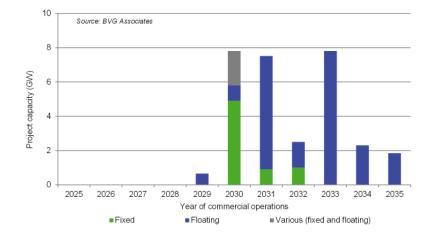
Source: Offshore Wind Scotland website

Observations

 This map shows all Scottish projects and all project phases



Scottish project pipeline



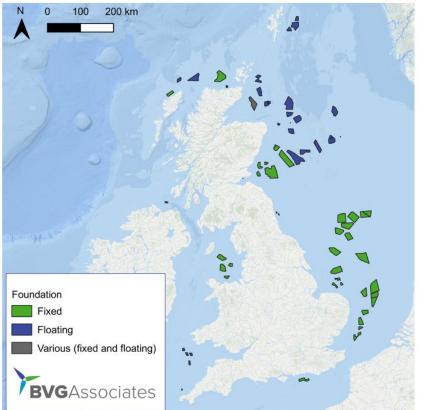
Observations

- Includes planned projects that have seabed lease and a publicly declared commercial operation date (COD)
- Cumulative capacity of 28.4 GW from ScotWind and INTOG projects
 - 6.8 GW fixed bottom 4 projects
 - 21.6 GW floating 21 projects

 Total ScotWind and INTOG leased capacity is 35.7 GW, across 33 projects in total



UK project pipeline



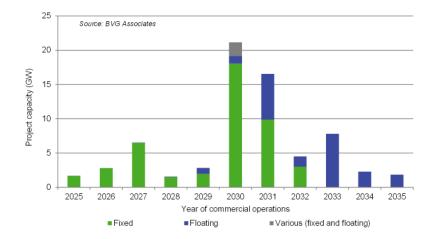
Observations

 This map shows all UK projects with a seabed lease and a delivery date up to 2035

 Includes some projects presently under construction



UK project pipeline

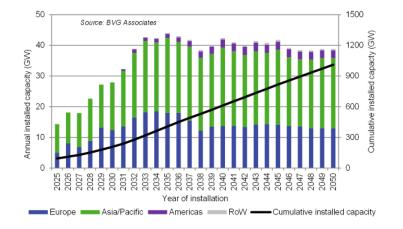


Observations

- Includes projects that have seabed lease and a publicly declared COD
- 45.4 GW fixed bottom 33 projects
- 22.4 GW floating 30 projects
- All projects need to secure permits and a power offtake agreement (CFD)



Global Forecast - Fixed

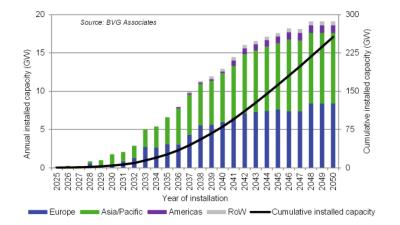


Observations

- BVGA forecast of global capacity
- Takes account of declared Government targets
- Cumulative global capacity
 - By 2035: 406 GW
 - By 2050: 1,011 GW
- Dominated by Europe and APAC
- Reaches 40 GW per year by mid 2030s



Global Forecast - Floating



Observations

- BVGA forecast of global capacity
- Takes account of declared Government targets
- Cumulative global floating capacity
 - By 2035: 26.5 GW
 - By 2050: 256 GW
- Dominated by Europe and APAC
- Reaches 10 GW per year by late 2030s



Key success factors for suppliers to offshore wind

- Understand the processes that developers face get to know the risks and commercial dynamics
- Understand how your services and products fit be clear on the problems you can solve
- Understand the setup of the supply chain establish who your direct client be
- Get to know approaches to procurement and contracting learn how to engage

Sources of useful information and support:

- The Fixed Guide: guidetoanoffshorewindfarm.com
- The Floating Guide: guidetofloatingoffshorewind.com
- Wind Energy Support Toolkit Offshore Wind Growth Partnership
- Join The Clean Energy Cluster







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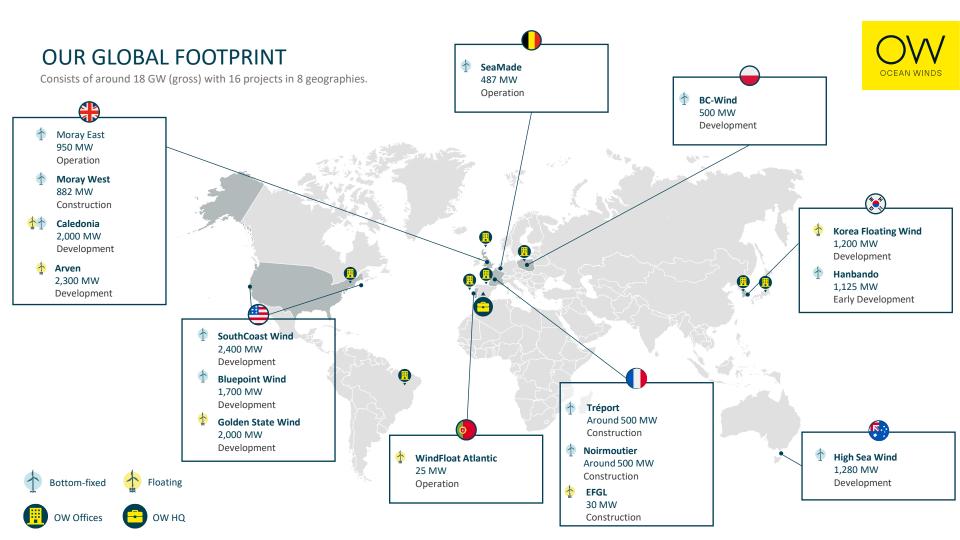
Nicola Watson Procurement Associate Ocean Winds



OCEAN WINDS

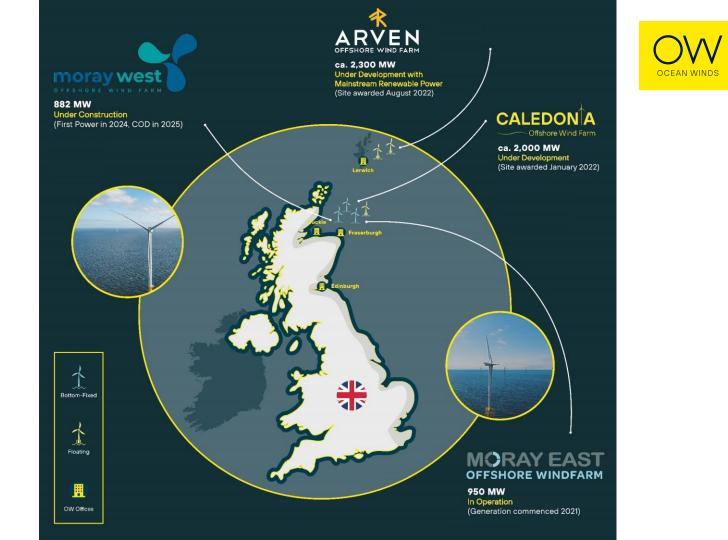
UK Projects Supply Chain

Nicola Watson, February 2025



OW UK PROJECTS

4 projects with 6.1 GW gross capacity



OW UK OPERATIONS





Fraserburgh O&M Base Opened 2021 WTG SOV vessel base with dedicated quayside

• Now in year 4 of operations

- 100 Turbines, 3 Offshore Substations, 1 Onshore Substation (New Deer) – 950MW
- One CTV, One SOV
- 2 shifts, 6 Technicians
- Frameworks
- Tenders



Buckie New O&M Base CTV Base for Moray West Quayside improvements inc. new pontoons and crane

- Now in year one of O&M
- 60 Turbines, 2 Offshore Substations, 1 Onshore Substation (Whitehillock) – 882MW
- 1 CTV
- 2 shifts, 6 Technicians per shift
- Frameworks
- Tenders

Caledonia Offshore Wind Farm

Located Outer Moray Firth. 2GW total project capacity split into 2 phases (up to 1100MW in each phase consented)



Key Activities

Signed Option Lease Agreement for exclusive rights to develop an offshore wind farm as part of the ScotWind bidding round, within the NE4 Plan Option located within the Moray Firth.

Offshore and Onshore Scoping Reports submitted in 2022.

Consenting – EIA completed in 2024 and Onshore and Offshore consent applications submitted to planning authorities in Q4 2024. Expected consent application approval Q4 2025

Site Data

Array area and export corridor geophysical surveys in 2022 and 2023. Array area geotechnical surveys in 2023 and 2024. FLiDAR wind & metocean measurement campaign ongoing.

Grid connection – Holistic Network Design (HND) states connection date of 2030 for initial phase of project.

Key concept design activities ongoing

Bottom-fixed foundation concept design Electrical system FEED

Tendering Opportunities

- Foundation Detailed Design Estimated launch Q2 2025
- WTG Supply / Estimated launch Q3/Q4 2025
- Foundation Supply / Estimated launch Q4 2025
- Foundation T&I / Estimated launch Q4 2025
- Substations / Estimated launch Q4 2025
- Onshore Civils / Estimated launch Q4 2025
- Offshore Export Cables / Estimated launch Q4 2025
- Array Cables / Estimated launch Q1 2026
- Onshore Export Cables / Estimated launch Q1 2026
- Key Contact: Senior Procurement Associate: Caroline Brown Email: <u>caroline.brown@oceanwinds.com</u>





oceanwinds.com



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Stephen Kennedy Procurement & Commercial Manager Muir Mhòr Offshore Wind Farm



A joint venture between Fred. Olsen Seawind & Vattenfall





Ownership

Fred. Olsen Seawind Limited and Vattenfall are 50/50 joint venture partners for Muir Mhòr Offshore Wind Farm

Project location

63km from the Aberdeenshire coast, east of Peterhead

Water depth

Average depth of 72 metres (range 60 – 100 metres)

Capacity

Up to 1GW – powering the equivalent of up to 1.2M homes per year $% \left({{{\rm{D}}_{\rm{A}}}} \right)$

Technology

Floating

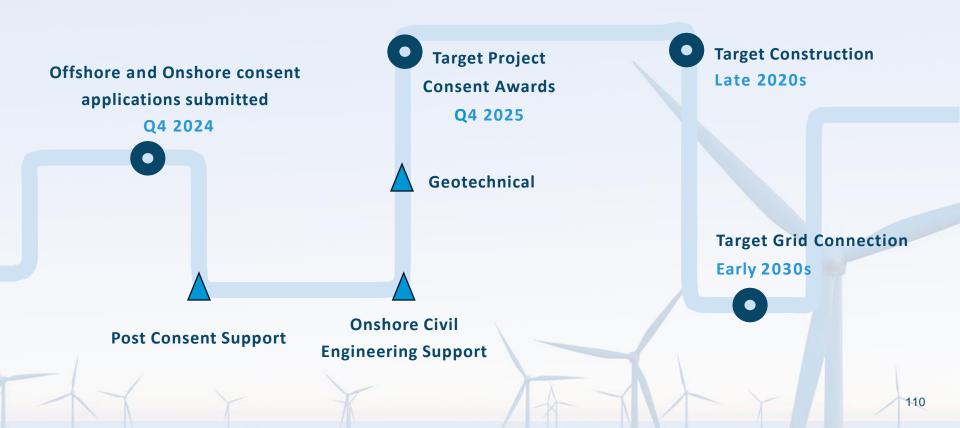
Grid connection location

Netherton Hub, Aberdeenshire

Indicative Timeline

Key procurement within the next 12 months





What sets suppliers apart from the crowd?

Communication

Be clear about what you need from us.

Solutions focused

Can propose alternative opportunities, better options or solutions.

Committed

MUIR MHÒR

Making the time to build a relationship







Supplier Registration Portal

Our Supplier Registration Portal went live in 2023 and industry suppliers are **invited to register** with us and be a part of our project.

We are **committed** to a transparent and inclusive approach. In alignment with our projects Procurement and Contracting Strategy, we will exhaust every opportunity to source **local suppliers**.



Work with us

We are **committed** to a transparent and inclusive approach. In alignment with our project's procurement and contracting strategy, we will exhaust every opportunity to source **local suppliers**.

We are eager to hear from those active in the supply chain as well as those wishing to explore how they can participate. You can register your interest by clicking the button below.

SIGN UP TO OUR SUPPLY CHAIN REGISTER HERE



muirmhor.co.uk/our-supply-chain





info@muirmhor.co.uk supplychain@muirmhor.co.uk



Get in

touch

muirmhor.co.uk



Muir Mhòr Offshore Wind Farm Limited

3



Gavin Smart UK & Ireland Head of New Business & Supply Chain Strategy ScottishPower Renewables



Renewable Energy Supply Chain Conference 2025

Scottish Renewables | March 2025

Offshore Wind Portfolio Overview and Opportunities

Gavin Smart

Iberdrola Group | Offshore Pipeline

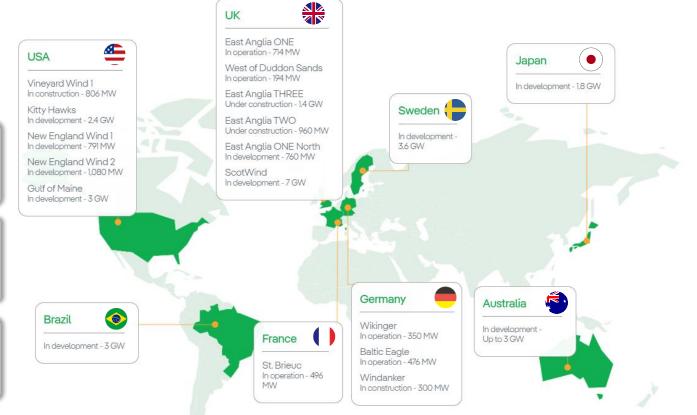


One of the world's largest integrated utility companies and a world leader in wind energy.

2.3GW capacity growing to 3GW by 2025

4.8GW installed by 20274 GW of advanced pipeline...

....Complemented by sites in development and scoping stages



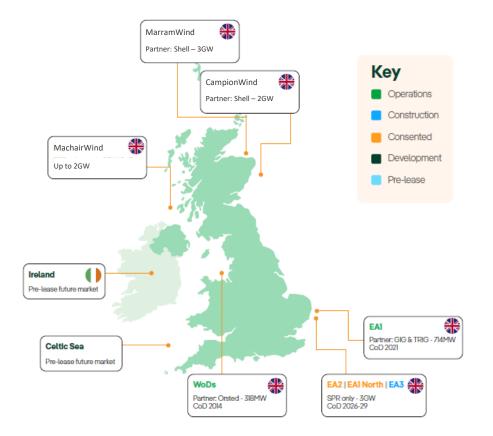


Spotlight on the UK

ScottishPower Renewables is part of the ScottishPower group of companies operating in the UK under the Iberdrola Group

Scan here for the Supplier Registration Portal









MarramWind Project Timeline and Overview

2023 -

The MarramWind Scoping Report was submitted to Aberdeenshire Council and the Marine Directorate. The Scoping Report is available on the project's website www.marramwind.co.uk.

A Public Drop-In-Day event was held in Peterhead for stakeholders to learn about the project. A supply chain event was also held for local businesses and suppliers.

2025 -

Submission of necessary applications and consents to the consenting authorities: Aberdeenshire Council and the Marine Directorate. During the subsequent determination period, stakeholders will have further opportunity to comment on the MarramWind proposals.

> Late 2020s — Construction anticipated to commence, subject to consent.

MarramWind 🔘

- 2022

ScottishPower and Shell were awarded rights to develop MarramWind within Plan Option NE7 of Scotland's 'Sectoral Marine Plan - Offshore Wind Energy (2020)' as part of Crown Estate Scotland's ScotWind leasing round. Environmental surveys and data gathering commenced in the marine and terrestrial environments to inform the EIA and prolect design.

2024

Two rounds of public consultation are being held, each including public events and online Q&A sessions, providing stakeholders with opportunities to view and feedback on the project proposals during the development stage.

Launch of STEM outreach programme to help raise awareness of future career opportunities in offshore wind.

- 2026

2030s

Anticipated planning decision and various permissions to be made for the offshore and onshore consents. Updated Supply Chain Development Statement submitted to Crown Estate Scotland.



Technology	Floating
Capacity	3,000MW
Site Area	680 km ²
Centre Point to Shore	77 km
Mean Depth	104m
Grid connection	Peterhead from 2033
Contraction Contra	

MarramWind anticipated to become operational. All dates are indicative and subject to change.



PROGRAMME MILESTONES

2024

- Detailed Design Completions
- UXO ID & Removal
- Manufacturing Progress on WF & Grid

2025

Onshore Grid Construction

Completion

• Offshore WF (MPs & TPs) & Grid (Jacket & Topside) ready for load out

2026

- Offshore Grid Available
- Offshore WF Install (IAC & WTG)
- System Commissioning, 1st Export
- COD Q4

2027

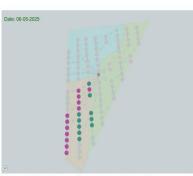
 Operation & Maintenance Phase Commences











MP Afe Lift
 P Junito J
 AC Lay
 AC Bay
 WTG X-Class
 WTG O-Class3



East Anglia THREE – Scope / Suppliers







SPR Offshore Wind Supply Chain Portal



https://www.scottishpowerrenewables.com/pages/offshore w ind suppliers hub.aspx

MachairWind Supply Chain Portal

We are keen to engage with supply chain companies who can provide the goods and services we need to develop, build and operate MachairWind. Potential suppliers can register their interest via our website at:

https://www.scottishpowerrenewables.com/pages/machairwind_supply_chain

MarramWind Supply Chain Portal

We are keen to engage with supply-chain companies who can provide the goods and services we need to develop, build and operate MarramWind. Potential suppliers can register their interest via our website at:

https://www.marramwind.co.uk/register-yourinterest

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