



SCOTLAND'S RENEWABLE ENERGY INDUSTRY

SUPPLY CHAIN IMPACT STATEMENT 2022/23



HEADLINE SPONSOR

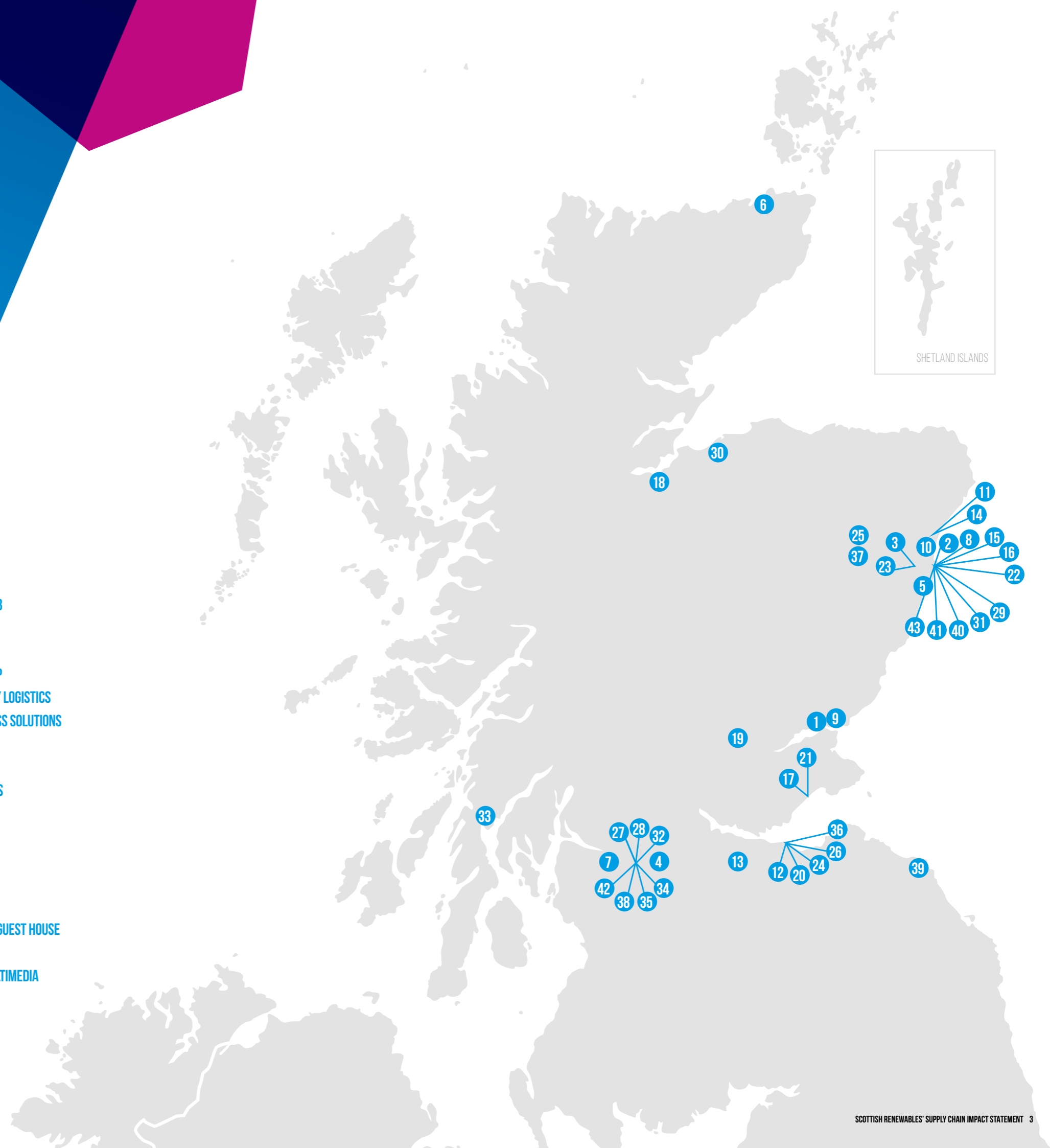


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Renewable energy is not only at the centre of our fight against climate change but also of our economy, with billions of pounds of investment being made in Scotland every year.

Scotland has seen one of its most successful years in renewable energy generation to date. Production between 2021 and 2022 was up by almost a third.

These figures show the exceptional promise of a sector which offers Scotland huge industrial and economic opportunities.

With The Scottish Government's draft Energy Strategy and Just Transition Plan published it highlights the need to be taking bold steps towards the clean energy system of the future. It is clear that setting out a transformational route map to net-zero in Scotland is now, more than ever, absolutely essential to signal that we are the place not just with resources but also with the commitment to support the talent and the know how to deliver.

With rising demand for new infrastructure, talented supply chain companies and skilled people are key to delivering this energy system, continuously innovating and expanding to offer net-zero projects with solutions that never cease to impress.

Scotland boasts a plethora of businesses with unique offerings, such as subsea cable protection, offshore crew safety devices, onshore wind testing and inspection, residential low-carbon heat solutions and innovative tidal turbine technology.

With two recently-announced Green Freeports in Inverness and Cromarty Firth and the Firth of Forth, it is no wonder the eyes of the world are looking to Scotland to lead the way in the commercialisation of floating offshore wind.

Time is of the essence if Scotland is to step up to the plate and it is vital that the Scottish and UK Governments invest in Scotland's ports to build the essential infrastructure the renewable energy

sector needs. In alignment with the conclusions of Scotland's Strategic Investment Assessment the Floating Offshore Wind Task Force recommends a strong and early focus on ports infrastructure. In its report published in March 2023, the Task Force states that up to five Scottish ports need to be transformed as soon as possible into new industrial hubs. In addition, a minimum of four ports should be revitalised for manufacturing.

With a huge and exciting pipeline of work coming across various technologies including green hydrogen, solar and low-carbon heat, the Scottish supply chain is presented with a vast opportunity for growth. In the face of unprecedented challenges such as the energy crisis, uncertain commodity prices exacerbated by the Russia-Ukraine conflict and changing political landscapes, it is clear the resilience of our local companies should be admired.

With the support of our headline sponsor SSE Renewables, the fourth edition of this annual publication collates a snapshot of case studies demonstrating the tenacity and fantastic work being delivered across this ever-growing sector.

The number of pages within this publication grows year upon year and I am proud to see the dedication of companies creating solutions and clean green jobs from the outermost islands to the Borders of Scotland.

Claire Mack
Chief Executive



A RENEWABLE ENERGY REVOLUTION

The renewable energy industry currently presents **Scottish supply chain companies with the biggest economic opportunity for business growth.**

This year's Supply Chain Impact Statement highlights how Scotland's supply chain, which stretches from the Borders to the islands, is utilising its expertise, skills and capabilities to deliver specialist work across all renewable energy technologies, including onshore and offshore wind, solar, low-carbon heat and storage solutions.

A short survey of the 45 organisations featured in his year's Supply Chain Impact Statement found that:



This Supply Chain Impact Statement gives us a real insight as to how supply chain businesses play a vital role in delivering the major infrastructure projects that will help us achieve our net-zero ambitions.

The businesses and organisations celebrated in this year's document demonstrate only a small proportion of the complex supplier network required for renewable energy projects and we know there will be more and more opportunities for further supply chain growth.

Research carried out by Scottish Renewables in the last 12 months found that our industry supports more than 27,000 jobs and is worth £5.6 billion to the Scottish economy while we have almost 22,000 undergraduates studying renewables-related subjects at our universities and colleges - a 70% increase on the same research carried out four years ago.

Scotland is thriving when it comes to renewable energy but we can't take our eye off the ball. We need to keep training and upskilling the people we already have as well as those transitioning from other sectors and we must remain an attractive option for new talent including those leaving our schools, colleges and universities.

Both the UK and Scottish Governments must work with industry to build on the successes highlighted in this statement and support the supply chain by investing in innovation, infrastructure and technology to make the most of the opportunities that lie ahead of us.

This year's document has again highlighted how Scotland is a global leader in the renewable energy industry with more and more companies sharing their renewable energy expertise across the world.

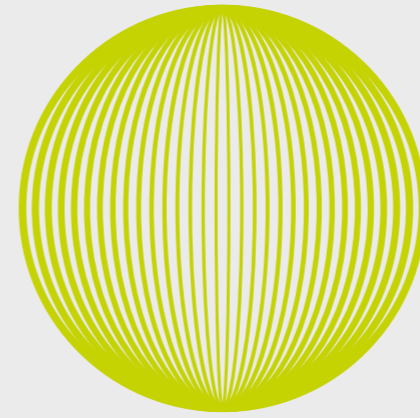
Research by Scottish Renewables found that exports are up almost 50% year-on-year and Scottish staff are now employed in 33 countries worldwide. The results of the research show an increase in companies reporting exports between 2019 and 2020, up from 38% to 58%. Not only is the volume of this activity growing but the value of exports is increasing too, with results showing a rise from £1.9 million to £2.8 million.

The future is bright for our renewable energy industry and with collaboration between the UK and Scottish Governments, developers and ambitious supply chain businesses we can ensure it continues to be the biggest economic opportunity for business growth in Scotland.

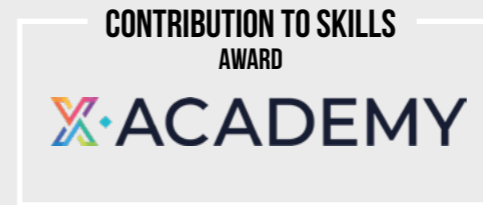
AWARD WINNING SUPPLIERS

Scotland has a diverse mix of renewable energy supply chain companies that it can be proud of. Many of these are Scottish Renewables award winners.

We are incredibly proud to champion the exceptional effort of our supply chain and are looking forward to showcasing these fantastic companies and individuals at our 2023 award shows.



THE SCOTTISH
GREEN ENERGY AWARDS™



SUPPORTERS

Scottish Renewables thanks the following organisations for their support and sponsorship of our 2023 Supply Chain Impact Statement.

Our sponsors are proud supporters of the local supply chain and encourage collaboration, innovation and improved performance across their projects.

HEADLINE SPONSOR: SSE RENEWABLES

Time to Deliver a Green Jobs Revolution for Scotland

Scotland stands on the cusp of a once in a generation opportunity to put green jobs at the heart of its future economic prosperity - whether it's from our mature onshore wind market, our huge potential pipeline of offshore wind, or the chance to lead the world in the development of floating offshore wind technology.



Scotland needs green manufacturing jobs and at SSE Renewables we're working tirelessly to make that happen. As a national renewable energy champion and a world leader in offshore wind, SSE Renewables is using the strength of its enviable 8GW-plus Scottish offshore construction and development pipeline – from the 1.5GW Seagreen and Seagreen 1A projects to its proposed 4.1GW Berwick Bank development and 2.6GW Ossian floating wind project – to make supply chain



investment happen and provide opportunities for Scottish workers to make the transition from oil and gas to renewables.

SSE Renewables is also at the forefront of grasping the huge and ever-growing opportunities from the circular economy. Last month, along with our partners at University of Strathclyde, the National Manufacturing Institute Scotland (NMIS) and Renewable Parts, we launched the new Coalition for Wind Industry Circularity.

Research for the coalition has shown that building the capabilities to refurbish wind turbine parts in the UK could generate more than 20,000 full-time equivalent jobs by 2035 and prevent more than 800,000 tonnes of parts from being scrapped.

SSE Renewables stands ready to work in collaboration with developers, suppliers and government to deliver the green jobs Scotland needs.



SUPPORTING SPONSOR: EDF RENEWABLES UK

In Scotland, EDF Renewables onshore wind portfolio continues to expand, with 10 operational onshore wind farms and 1.5GW of projects in planning and development in Scotland. Projects include Neart na Gaoithe (NnG) offshore wind farm. With an investment of approximately £2 billion, NnG has created more than 100 direct jobs, with many more throughout the supply chain.

EDF Renewables has a track record of using local suppliers across its projects, and NnG is no different. The new operations and maintenance facility will create up to 50 high quality jobs at Eyemouth Harbour for the 25-year lifespan of the wind farm, 54 turbine towers are being assembled at the Port of Dundee, safety devices are being supplied by Aberdeen-based Donut International and local businesses are seeing a positive knock-on effect.

EDF Renewables is continuing to work closely with suppliers to ensure Scotland benefits as much as possible from its projects. We want local businesses to benefit from our investment – directly through construction work contracts, workers staying in local accommodation or providing local jobs for local people.



SUPPORTING SPONSOR: OCEAN WINDS

Building on the supply chain successes of the Moray East offshore wind project, the Moray West team have taken supply chain engagement a step further. The team objective is to bring the wider supply chain closer to tier one suppliers and to promote tools which allow increased access to procurement opportunities.

Some successful work awarded already includes J-tube cages from Global Energy Group with local fabrication at Port of Nigg, Siemens Energy have sourced Onshore Modular Control and Amenities

buildings from Ross-shire Engineering and Nexans are using several Scottish contractors for onshore civils works.

Our Meet-the-Buyer events have facilitated more than 400 one-to-one conversations and the Ocean Winds database, which allows our buying teams to include more suppliers in our tender processes, has more than 1000 entries from UK suppliers.










Ocean Winds is active across skills development, supporting curriculum development, providing funding and collaborating with fellow developers. Ocean Winds also operates a school STEM (Science, Technology, Engineering and Maths) programme and our recruitment processes encourage young people enter the sector through a new apprenticeship scheme, internship programmes, sponsorship for undergraduates and a graduate intake programme.



SUPPLIER CASE STUDIES

The following case studies showcase some of the talented and entrepreneurial suppliers who are bringing their expertise to Scotland's renewable energy market.

Scotland's green energy suppliers provide their services to renewable technologies including:

-  HYDRO
-  WIND
-  WAVE AND TIDAL
-  HYDROGEN
-  OFFSHORE WIND
-  STORAGE
-  SOLAR
-  OTHER
-  HEAT

ACE AQUATEC

Protecting marine life across the globe

Dundee-based Ace Aquatec develops innovative products that drive welfare-focused practices in offshore marine sectors.

With global demand for renewable energy on the rise, it is crucial to consider the welfare of marine life. FaunaGuard has been purpose-built to generate avoidance behaviours amongst marine species groups – fish, seals, porpoises, turtles – by targeting their specific hearing abilities. It combines academically-validated sound patterns with award-winning acoustic transducer technology, using safe levels of sound, safeguarding oceanic wildlife from the risks associated with offshore construction works.

In 2022, Ace Aquatec demonstrated its international reach for FaunaGuard with modules deployed in Germany, France, the USA and the Netherlands – most recently on Crosswind's Hollandse Kust Noord project. Ace Aquatec aims to open new markets for FaunaGuard technology in Azerbaijan and New Zealand later this year.

“OUR UNDERWATER NEIGHBOURS CAN BE ADVERSELY AFFECTED BY UNDERWATER NOISE THAT IS PRODUCED BY THE INSTALLATION OF SUBSEA FOUNDATIONS. FAUNAGUARD IS A PLUG-AND-PLAY SOLUTION THAT EMITS SPECIALISED SAFE ACOUSTICS INTO THE MARINE SURROUNDINGS TO WARN MARINE FAUNA THAT OPERATIONS ARE TO COMMENCE AND ALLOW THEM AMPLE TIME TO MOVE AWAY TEMPORARILY FROM THE CONSTRUCTION AREA.”

Andrew Gillespie, Marine Protection Products Manager, **Ace Aquatec**



ASCO

Integrated solutions for net-zero energy projects

A provider of port operations, logistics and materials management, ASCO employs more than 1,500 people across the globe.

Building on 50 years of offshore experience, ASCO offers warehousing, marine coordination, ship agency, customs clearance, environmental support, heavy-lifting and technical services.

ASCO operates from port quaysides to support offshore wind farm projects including Seagreen, Moray East, Hywind, Dogger Bank, Aberdeen Bay, Kincardine, Dudgeon and Greater Gabbard.

Alongside its work in the offshore wind market, ASCO is championing the development of hydrogen and carbon capture through various projects in Europe including the ACORN project in Scotland.

“AT ASCO, WE HAVE AN INCREDIBLY TALENTED AND EXPERIENCED WORKFORCE WITH A STRONG SKILL SET SUITED TO THE ENTIRE ENERGY SECTOR.

“WE BELIEVE THAT INVESTING IN OUR PROCESSES AND OUR PEOPLE TODAY BUILDS STRONG FOUNDATIONS FOR A SUSTAINABLE BUSINESS, ALLOWING US TO DEVELOP THE SKILLS REQUIRED TO MEET THE INDUSTRY CHALLENGES OF TOMORROW.”

Mike Pettigrew, Managing Director - UK, **ASCO**



ASSTEAD TECHNOLOGY

Successful performance is rewarded with further contracts at Neart na Gaoithe offshore wind farm

Asstead Technology is an integrated subsea technology and solutions specialist for the global offshore energy sector.

Approximately 60% of the company's workforce is based at its four sites across Scotland and more than 30% of Asstead Technology's revenue is derived from offshore wind.

In 2022, Asstead Technology was contracted by Saipem to support various projects during the construction and installation phase of the NnG offshore wind farm in the Firth of Forth. The company was initially awarded a contract for borehole inspection and based on its successful delivery was awarded additional work to support borehole internal casing cleaning, grouted pile installation and subsequent grout level monitoring.



"IT IS A REALLY EXCITING TIME TO BE INVOLVED IN OFFSHORE WIND AND WE ARE DELIGHTED TO BE SUPPORTING SAIPEM ON THE NNG OFFSHORE WIND FARM. THE INCREASING WORK IS FURTHER EVIDENCE OF OUR CAPABILITIES IN THIS SECTOR AND DEMONSTRATES OUR ABILITY TO DELIVER COST-EFFECTIVE, RELIABLE AND SAFE SOLUTIONS."

Ross MacLeod, Integrated Projects Director,
Asstead Technology

AUTONOMOUS IOT

Renewably-powered lighting and surveillance implemented at sustainable salmon farms

Combining the latest technologies and systems, Autonomous IoT produces innovative products to address climate change and decrease carbon emissions.

Autonomous IoT recently worked closely with Scottish Sea Farms to design a sustainable lighting and CCTV system for the newly opened state-of-the-art salmon hatchery at Barcaldine.

Eight solar and wind-powered LED lighting and CCTV intelligent technology platforms were configured using motion detection to limit energy consumption when not in use.

The project was delivered with sustainable values at its heart and now provides Scottish Sea Farms with a green, efficient security solution.



"WE THRIVE ON SUPPORTING LOCAL COMMUNITIES AND THE SCOTTISH SUPPLY CHAIN THROUGH ALL OF OUR DESIGN AND MANUFACTURING ACTIVITIES."

Bobby Kane, CEO,
Autonomous IoT

BALMORAL

Renewables portfolio backed by comprehensive services

Subsea experts Balmoral offers its ambitious programme of product development to the offshore renewables sector.

Balmoral delivers a range of services which include design engineering, manufacturing and in-house hydrostatic and mechanical testing.

The company's comprehensive product portfolio includes its patented FibreFlex® cable protection system as well as mooring buoyancy and tether clamps.

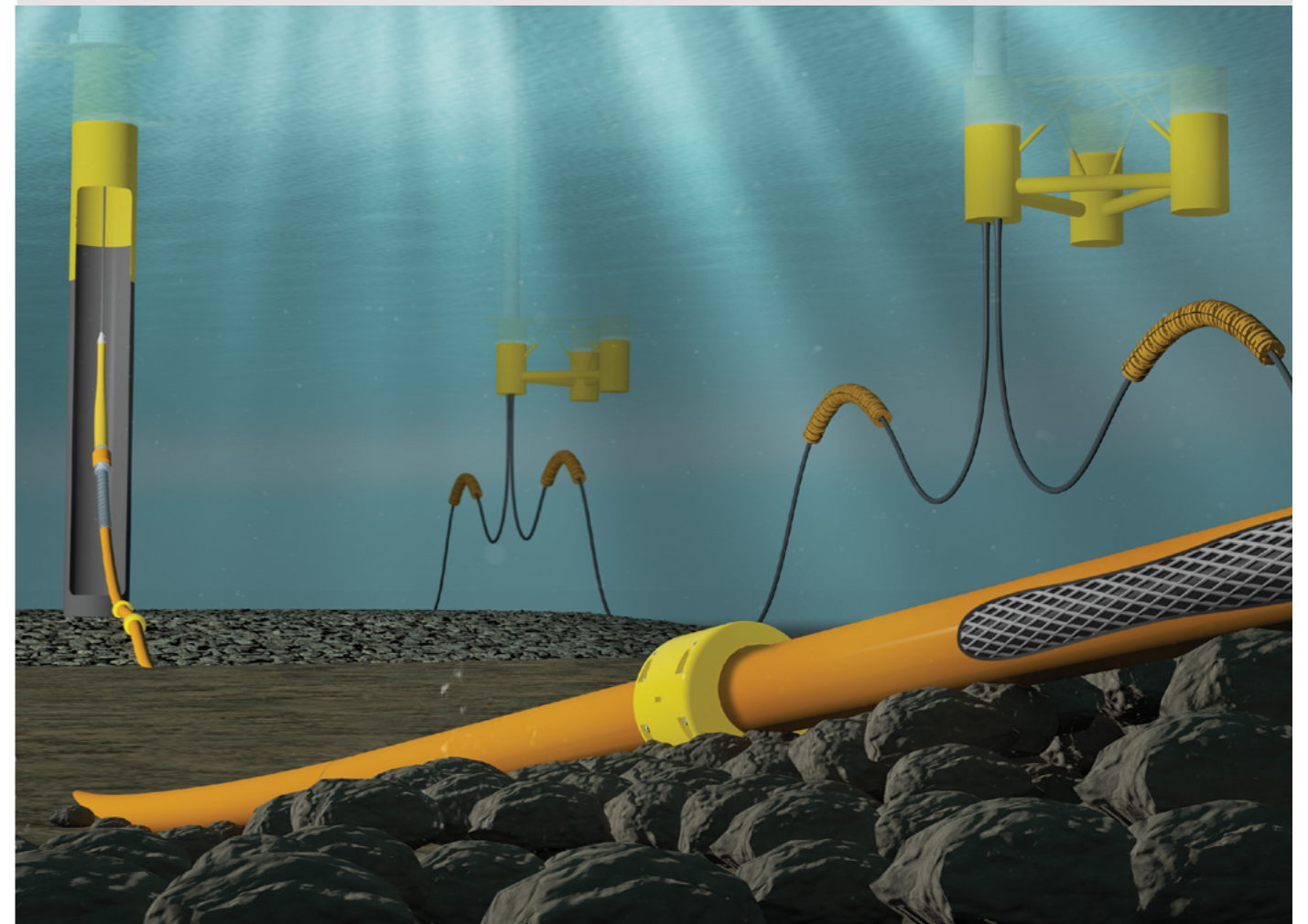
Recent innovation has led to product developments such as the Balmoral T-Clamp™, a tether clamp designed to secure sub-surface lines to seabed anchors.

"OUR PORTFOLIO ALLOWS US TO SERVE THE WIDER OFFSHORE ENERGY MARKETS AS WELL AS OFFSHORE WIND. FOR EXAMPLE, OUR CABLE MANAGEMENT AND BUOYANCY SOLUTIONS CAN BE DEPLOYED ON WAVE AND TIDAL INSTALLATIONS WHILE OUR GRP AND BUOYANCY PRODUCTS ARE HIGHLY SUITED TO OFFSHORE HYDROGEN PROJECTS."

Ian Milne, Sales Manager for Renewables,
Balmoral

Further developments include the Balmoral Duraguard® touchdown protection which preserves subsea cable arrays from abrasion and impact damage as well as the company's crossing protection system which provides protection and separation between new and existing cables or pipelines.

The company also offers a diverse array of ancillary equipment such as mooring buoys, bend restrictors/stiffeners and bellmouths.





Small but mighty family-run supplier delivers for Scottish green energy projects

Based in Caithness, family-run Blargoans has been supplying the renewable sector for 10 years. Primarily working on onshore and offshore wind projects the business offers a diverse range of goods and services including industrial supplies, transportation, recruitment and PPE.

In 2021, Blargoans became a multi award-winning business, receiving the Outstanding Service Award at Scottish Renewables' Scottish Green Energy Awards and the Best Suppliers to Onshore Renewables Award at the Scottish Highlands and Islands Renewable Energy Awards.



"BLARGOANS PRIDE OURSELVES IN PROVIDING A FRIENDLY FACE-TO-FACE SERVICE AND WE'VE PROVED YOU DON'T HAVE TO BE A MULTINATIONAL COMPANY TO BE ABLE TO DELIVER FOR THE RENEWABLE ENERGY INDUSTRY HERE IN SCOTLAND."

Martin Nicolson, Managing Director, Blargoans



Service Operation Vessels with Walk to Work gangways

Comfort, safety, access and efficiency

www.bibbymarine.com



Renewable Heat Installer of the year collaborates with Scottish communities

BRB Ltd were an early adopter of domestic air source heat pumps (ASHPs) and other supporting renewable technologies including solar PV and electric battery storage systems.

Since 2003, BRB has installed more than 2,100 domestic ASHP systems across the country including in some of Scotland's most rural areas.

A recently-completed rural project in South Lanarkshire involved the installation of more than 100 ASHPs. The company is also working on a project to install ASHPs, solar panels and battery storage for rural housing association tenants.

A crucial element of these projects is the involvement and engagement of the tenants and local communities. Most notably, this involves a dedicated focus on working with vulnerable individuals and communities to provide

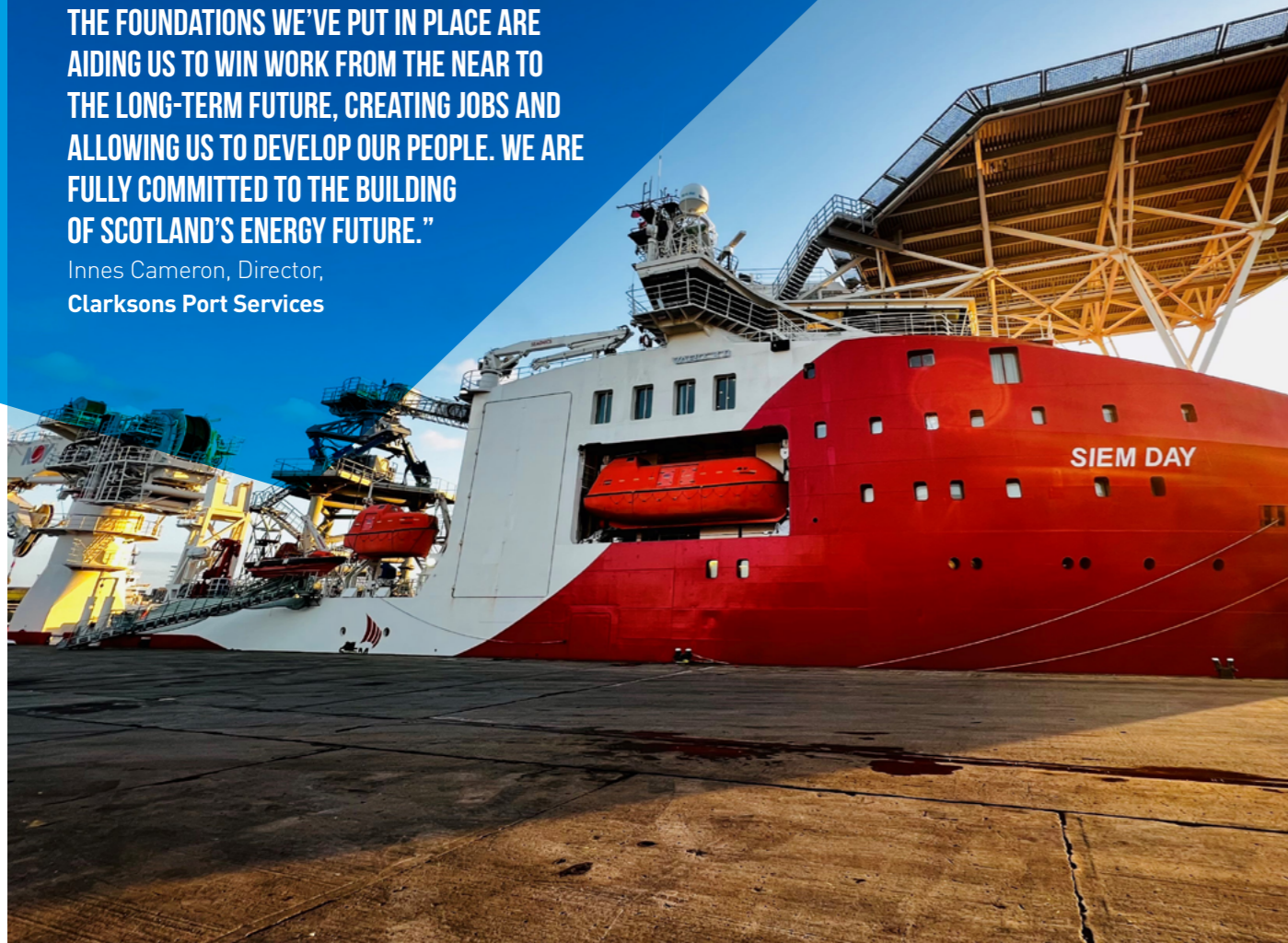
affordable heating for their homes and strive towards ending fuel poverty in Scotland.

BRB also places a focus on its engagement with young people and with 10 apprentices currently in the organisation, is committed to skills development in the renewable energy sector.



“CLARKSONS PORT SERVICES CONTINUES TO DEVELOP ITS OFFERING TO THE OFFSHORE WIND SECTOR AROUND THE COAST OF SCOTLAND. OUR ENGAGEMENT TO DATE HAS BEEN FRUITFUL AND THE FOUNDATIONS WE’VE PUT IN PLACE ARE AIDING US TO WIN WORK FROM THE NEAR TO THE LONG-TERM FUTURE, CREATING JOBS AND ALLOWING US TO DEVELOP OUR PEOPLE. WE ARE FULLY COMMITTED TO THE BUILDING OF SCOTLAND’S ENERGY FUTURE.”

Innes Cameron, Director,
Clarksons Port Services



CLARKSONS PORT SERVICES



Offshore support company recognised for sustainable growth

With 22 offices across the North Sea alone, Clarksons Port Services (CPS) has provided marine integration services and co-ordination to offshore renewable projects since 2003.

From office locations in Aberdeen, Blyth and Montrose the company has delivered work on Scottish offshore wind farms providing services such as crew transfer vessels (CTVs), grouting and cable installation.

Over the course of this work the company utilised 120 suppliers, supported eight construction vessels, seven CTVs and one tug vessel. CPS also supports skills development in the sector and has employed three new trainees to learn about agency operations.

In 2022, CPS was recognised with the 2022 All STAR award for customer engagement and increasing opportunities to sustainably grow in offshore wind. In addition, the company is a beneficiary of the Offshore Wind Growth Partnership – Sharing in Growth Offshore Wind Programme, with hopes to improve efficiency and productivity within the offshore wind supply chain.

COAST RENEWABLE SERVICES



Growing personnel provider looks to the future with new Dundee training academy

Dundee-based Coast Renewable Services (CRS) supplies trained personnel to wind farm projects for diagnostic, repair, maintenance, installation and inspection works. The company has grown beyond its Scottish roots, now operating across the UK, Ireland and Scandinavia.

Collaborating with EDF Renewables, CRS has supported the Dorenell, Corriemoillie and Fallago Rig wind farm projects.

CRS is continuing to expand, with a new training academy set to open in spring 2023. The academy, in conjunction with Dundee and Angus College and based in the new Michelin Innovation Park, further positions Port of Dundee as a renewables hub in Scotland. The academy will offer a variety of courses from safety training, firefighting, first-aid and working from height to prepare for operating in the growing renewables industry.

CRS also hopes to grow its business through a joint venture with Peterson Energy Logistics which will provide fully-integrated packages to support the offshore wind sector. In addition, a move into solar and electric vehicle charging point installations, a growing blades division and the establishment of a new main components division will see further expansion of the company over the coming years.



“IN THE PAST FOUR YEARS WE HAVE SEEN HUGE PROGRESSION IN RENEWABLES IN SCOTLAND AND WE PRIDE OURSELVES ON BEING WELL PLACED TO SUPPORT SCOTTISH PROJECTS. WE CONSTANTLY WORK TO EVOLVE TO NEW TECHNOLOGIES AND OFFER A WORLD CLASS SERVICE ON OUR DOORSTEP.”

Mark Robson, Managing Director,
Coast Renewable Services

DONUT INTERNATIONAL



Crew safety is the principal priority for Aberdeen-based escape equipment company

Donut, a manufacturer and supplier of Personal Controlled Descent Devices (PCDDs) for offshore industries is a family business with a global footprint.

The PCDDs are designed to enable workers to escape from dangerous situations at height by controlling their descent. Now an industry standard, the portable design can be used on any structure and can also be used to rescue injured people.

With its beginnings in oil and gas more than 30 years ago Donut is now working to supply units to offshore wind farms, providing 37 devices for the Neart na Gaoithe (NnG) project. As demand continues to increase, Donut aims to be a leading crew safety supplier for offshore renewables projects across the globe.

“WE ARE PROUD THAT AROUND 800 DONUT DEVICES HAVE BEEN SUPPLIED TO THE OFFSHORE WIND INDUSTRY AND COUNTLESS OFFSHORE PERSONNEL HAVE BEEN TRAINED IN THEIR USE. WE ARE SEEING INCREASED DEMAND AND ARE PLEASED THAT OUR PRODUCT IS BEING SELECTED AS THE STANDARD LIFE SAVING APPLIANCE FOR EMERGENCY ESCAPE.”

Peter Waite, OSW Business Manager, Donut International



FLEXLIFE



Ellon business provides renewables sector with expertise in dynamic cables

Engineering and integrity management services provider FlexLife is branching out into the renewables market.

Since 2007 the company has provided projects with expertise in dynamic cable analysis and has recently transitioned into offshore wind, tidal energy and green hydrogen projects. FlexLife’s new renewables initiative

has generated two new roles within the company to support offshore wind and has influenced a consortium with other renewable suppliers including THREE60 Energy, Pryme Group and Glacier Energy.

To improve its renewables profile, FlexLife is taking part in the Fit 4 Offshore Renewables programme which provides valuable training and facilitates exposure to industry contacts.



“OUR EXPERIENCE FROM THE OIL AND GAS INDUSTRY HAS PROVED INVALUABLE, WITH TRANSFERABLE SKILLS OFFERING AN EXCELLENT SERVICE TO OUR CLIENTS”

Stewart Duthie, Director, Subsea Technology, FlexLife

FORTH PORTS



Site becomes one of the first Green Freeports in Scotland

Forth Ports’ 17-hectare purpose-built renewables site in Dundee is a significant economic driver for the city. The Port is currently delivering the Neart na Gaoithe offshore wind farm and has recently been selected as the pre-assembly and marshalling site for the Inch Cape project.

The group is also creating Scotland’s largest renewables hub at the Port of Leith. The £50 million investment will see the 75-hectare facility operational in 2024, providing extensive marshalling and assembly capability with the capacity for manufacturing, and a base for small and medium enterprises in the offshore wind supply chain. The hub will create employment of up to 1,000 high quality, long term direct jobs and

around 2,000 indirect jobs. The Port has already signed a reservation and collaboration agreement with BP and EnBW as the marshalling port for the 2.9GW Morven offshore wind project.

Forth Ports’ transformational Green Freeport bid was successful in the UK and Scottish Government Green Freeport scheme, moving a step closer to creating a green growth corridor in the heart of Scotland. The proposal will generate up to 50,000 new green jobs and act as a catalyst for new green technologies and renewable energy manufacturing which will make a significant contribution to the re-industrialisation of Scotland. The bid will unlock up to £6 billion of private and public investment into productive and resilient industries including sustainable fuels, offshore wind manufacturing including floating wind, and generate a £4 billion boost in Gross Value Add to Scotland’s economy.



“FORTH PORTS HAS MADE RENEWABLE ENERGY DEVELOPMENT A REALITY IN SCOTLAND THROUGH SIGNIFICANT INVESTMENT IN OUR UNRIVALLED OFFSHORE RENEWABLES FACILITIES IN DUNDEE AND LEITH. IN ADDITION, THE TRANSFORMATIONAL VISION OF THE FORTH GREEN FREEPORT WILL HELP TO CREATE A GREEN GROWTH CORRIDOR WHICH WILL SUPPORT SCOTLAND’S DRIVE TO NET ZERO.”

David Webster, Director of Energy, Forth Ports

FOUND0CEAN



Global subsea grouting company develops plastic-free, biodegradable subsea supports

FoundOcean has been providing subsea grouting solutions for offshore energy industries for almost 60 years, transitioning from oil and gas to almost entirely offshore wind.

The company has completed several offshore wind farms around the world, in Scottish, English, Welsh, German, French, Dutch, Danish, Belgian, Taiwanese, Senegalese and Mauritanian waters.

2022 was an exciting year for FoundOcean as it introduced its plastic-free, biodegradable formworks. Initially manufactured for a German customer, driven by the Coalition to End Plastic Pollution by 2040, this solution is now widely available for all subsea grouting projects.

FoundOcean is also experiencing international growth, particularly its US division which has completed 80 energy projects since 2013.

The Livingston-based company is also closely collaborating with other supply chain companies through membership of the Venterra Group which brings together companies to create an integrated service across the lifecycle of wind power projects.



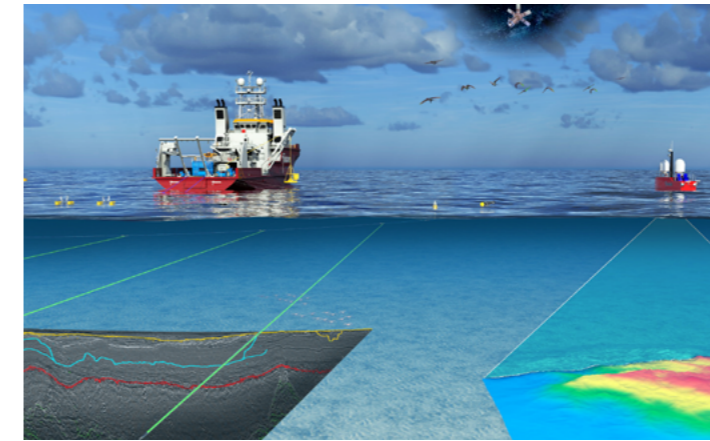
FUGRO



Geo-data helps inform wind farm developer decision-making

Geo-data specialist Fugro has been supporting renewable energy projects for more than 25 years. As offshore wind projects increase in size and move further offshore, geo-data provides important information to accelerate and de-risk developments and support future operations and maintenance tasks.

During 2022, Fugro completed a survey on behalf of MarramWind, a Shell and ScottishPower Renewables joint venture, for a proposed floating offshore wind farm with a potential installed capacity of 3GW.



Two Fugro vessels supported the project, completing approximately 200 days of surveys and more than 10,000km of survey lines within the 684km² project area. The geo-data collected provides crucial insights into the seabed and sub-surface conditions, enabling installers to make informed decisions on turbine and export cable placement.

This project was managed and operated from Fugro's offices in Scotland, which employ more than 400 people. The vessels were deployed from Aberdeen Harbour to the site just 95km off the Aberdeenshire coast in the North Sea.

"WE ARE EXCITED TO SUPPORT THE ENERGY TRANSITION IN SCOTLAND AND ARE COMMITTED TO DEVELOPING TECHNOLOGY AND INNOVATIONS THAT PROVIDE CLIENTS WITH THE DATA, INSIGHTS AND ADVICE TO ACCELERATE THEIR WINDFARM DEVELOPMENTS."

Linda Stewart, Director Marine Geophysical Europe, Fugro

FULKRUM



Reducing risk for the world's largest offshore wind farm

Fulkrum provides inspection, expediting, auditing and technical staffing to the global energy industry.

Headquartered in Aberdeen, the company is currently one of the providers contracted to support quality assurance and control operations at the Dogger Bank Wind Farm project.

Fulkrum's dedicated team has been providing inspection and quality assurance services to the world's largest offshore wind farm since 2021. Its work on the project has led to the minimisation of potential safety, budget and schedule risks.

Fulkrum has also supported offshore wind projects such as Moray East, Seagreen, Hornsea, Galloper and Courselles-sur-Mer.



Image: GE

"WE HAVE AN INTERNATIONAL FOOTPRINT WHICH ALLOWS OUR TEAM AND NETWORK OF LOCAL PERSONNEL TO SUPPORT SIGNIFICANT PROJECTS BRINGING FULKRUM, OUR CLIENTS, PARTNERS, AND THE INDUSTRY ONE STEP CLOSER TO A NET-ZERO FUTURE."

James Dunsford, Senior Business Development Manager for Energies, Fulkrum



Ambitious PPE specialist plans for American expansion

With a strong Scottish heritage in Aberdeen, Gibb Group's expansion plans include new premises in the city which will strengthen the growing personal protective equipment specialist.

After diversifying its product and services in line with renewable energy growth and customer demands, Gibb is now successfully delivering to the offshore wind sector.

Gibb has supported every Scottish offshore wind farm project from Robin Rigg to Moray East and Moray West, Beatrice, Seagreen, Nearth na Gaoithe, Aberdeen Bay and Kincardine, supplying main contractors and the supply chain.

The organisation's growth has seen a rise in the employee force by 30 and plans in the US are set to come to fruition later this year.

"WE CONSTANTLY EVOLVE OUR OFFERING TO SUIT THE EVER-CHANGING MARKET CONDITIONS AND NEEDS OF OUR CLIENTS. SCOTLAND HAS A PHENOMENAL OFFSHORE WIND RESOURCE AND AS AN EXPERIENCED SUPPLIER TO THE SECTOR, WITH A LOCAL BASE, WE HAVE THE CAPABILITY TO SUPPORT SOME OF THE LARGEST FIXED AND FLOATING WIND PROJECTS IN THE WORLD."

Lee Sparkes, European Sales Manager,
Gibb Safety & Survival



Overcoming freezing temperatures to safely deliver NDT and inspection services

Glacier Energy combines non-destructive testing and inspection expertise with rope access capabilities to support existing wind farms and life-extension projects both on and offshore.

In the past year, Glacier Energy was contracted to provide visual inspection and lighting protection systems surveys in Sweden. The business mobilised a rope access inspection team to perform the surveys on 20 wind turbines which were more than 160 metres tall. The team worked to stringent risk assessments, method statements and utilised specialist personal protective equipment.

These inspections, usually undertaken in spring, were completed in winter to adhere to the project's programme

requirements. To ensure the safety of the team, with temperatures between -4 and -15C, inspections had to be completed within 30 minutes.

Overcoming this weather obstacle, Glacier Energy completed the inspection within the critical timeline and ensured that the customer maximised the availability and production capability of its turbines.



Bumper year for the Port of Nigg

Global Energy Group (GEG) is owner and operator at Port of Nigg and is an integrated energy supply chain services company. In the offshore wind sector GEG has managed more than 2.6GW of assets through the Port across four consecutive projects.

July 2022 saw the unveiling of the Port's new East Quay, which increased the facility's deep water quayside capacity to more than 1,200 metres. The additional quayside will enable the port to service multiple large-scale projects simultaneously and will have the capability to accommodate next

generation class vessels along with future floating offshore wind opportunities.

2022 also saw the launch of the Observation Card Award scheme in partnership with Seaway 7 and Seagreen Wind Energy. The hazard awareness initiative promotes a safety first and open culture among employees and contractors, with nominated local charities benefitting from a monthly £1,000 donation.

In September, GEG secured further success in the form of a multi-million-pound contract from Ocean Winds for the supply of two J-tube frames to the Moray West project.



"GEG CONTINUES TO INVEST IN ITS PEOPLE, LAND AND ASSETS AS WELL AS BEING COMMITTED TO LEADING THE DEVELOPMENT OF AN OFFSHORE WIND ENERGY HUB IN SCOTLAND. BY BUILDING ON EXISTING CORE COMPETENCIES OF STORAGE, MARSHALLING, LOGISTICS AND FABRICATION AND EXPANDING OUR ASSEMBLY, MANUFACTURING AND O&M CAPABILITIES, OUR STRATEGIC GROWTH PLANS ARE ALIGNED TO SUPPORT THE DELIVERY OF GOVERNMENT TARGETS OF 50GW OF OFFSHORE WIND BY 2030."

Iain Sinclair, Executive Director of
Renewables and Energy Transition,
Global Energy Group

IMS HEAT PUMPS

Central-belt based installer sets the standard for low-carbon heat

Based in Perth, IMS designs, installs, services and maintains ground, air and water source heat pumps for residential self-build and renovation projects. 2022 saw an expansion of sales and staff numbers, increasing collaboration with local supply chain partners in North Ayrshire, Perth and Glasgow.

IMS is dedicated to enhancing skills and knowledge within its field through training quality assurance. In partnership with the Scottish & Northern Ireland Plumbing Employers' Federation (SNIPEF) and Perth College two non-gas apprentices graduated and moved straight into full-time positions. To help uphold standards, IMS sits on the SNIPEF Low Carbon Forum, the Ground Source Heat Pump Association Council and the MCS Heat Pump Working Group to ensure efficient system installation for all clients.

IMS was recognised for its efforts and was awarded the Highly Commended Scottish Renewable 2022 Heating Installer of the Year by the Energy Efficiency Association. To continue its positive environmental impact IMS has planted more than 200 trees on behalf of its clients.



ITPENERGISED

Innovative technical consultant collaborates on more than 600 projects to drive net-zero

diligence on numerous onshore renewables and storage project acquisitions, and advised distilleries on low-carbon heat and the energy transition.

With involvement in more than 600 UK and international projects in the past 12 months, ITP Energised's strength lies in its multidisciplinary team which works across the offshore, onshore, corporate, industrial, manufacturing and property sectors.

One notable project ITP Energised has undertaken is supporting Bruichladdich Distillery. The Islay distiller aims to move away from reliance on fuel oil and hopes to introduce hydrogen combustion technology in its distilling process.

Recent Scottish projects include providing technical support to successful ScotWind bidders, acting as onshore environmental impact assessment project manager for multiple onshore and offshore wind farm developments including Orkney, Kilgallioch, Cumberhead West and Berwick Bank. In addition to this, the company has carried out technical due

International projects include dynamic cable rating and design on Taiwan's Formosa 2 Offshore Wind Farm; technical, health, safety, environmental and social due diligence for a Kenyan mini solar grid company, and support to the United Nations Industrial Development Organization for a first-of-its-kind climate change adaptation project in the Democratic Republic of Congo.



"AT ITPENERGISED WE ARE PASSIONATE ABOUT THE TRANSITION TO NET-ZERO. WE'RE A TEAM OF TRUSTED TECHNICAL ADVISORS WHO SUPPORT OUR CLIENTS ACROSS A RANGE OF SECTORS AND TECHNOLOGIES."

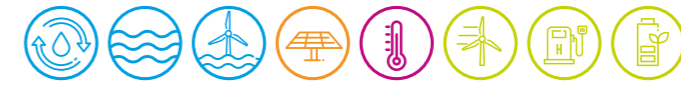
Jonny Clark, Managing Director,
ITP Energised

“OUR RECENT CONTRACT AWARDS, TOGETHER WITH OUR CONTINUED ADVANCED INSPECTION INVESTMENT, EVIDENCE OUR CAPABILITIES AS AN INSPECTION PROVIDER TO THE RENEWABLES SECTOR.”

George Shields, Co-Founder and Director, International Testing Services



INVEST ABERDEEN



Ports in the North East of Scotland look to the energy solutions of the future

PORT OF ABERDEEN

Already supporting projects including Aberdeen Offshore Wind Farm and Seagreen, Port of Aberdeen is delivering plans to support the energy transition across Scotland and beyond.

The port’s transformational South Harbour expansion project adds 1.5km of deepwater berthage, accommodates ships up to 300 metres in length and offers 125,000m² of project laydown area.

The expansion, coupled with the existing North Harbour, opens new opportunities to the organisation, including the forthcoming ScotWind offshore wind farms as well as green hydrogen projects. One example is Vattenfall’s Hydrogen Turbine project, which aims to be the first in the world to test the full integration of hydrogen production with an offshore wind turbine. The hydrogen will come ashore at the port, which is already in discussions with hydrogen exporters to develop the required storage and processing infrastructure.

PETERHEAD PORT

Peterhead Port Authority operates an all-purpose, all-weather port. It provides and supports fisheries, oil and gas and the renewables and leisure sectors.

The port was involved in construction of the Aberdeen Offshore Wind Farm, when it accommodated floating cranes with a maximum lifting capacity of 5,000 tonnes and barges for the transport of turbine foundations.

The port also provides a dedicated berth for crew transfer vessels operating on Hywind Scotland, the world’s first floating wind farm, located 18 miles off the coast of Peterhead.

FRASERBURGH HARBOUR

Fraserburgh is a busy and diverse port serving the fishing, offshore renewables and oil and gas industries. Home to Moray East Offshore Wind Farm’s marine base, and near many ScotWind sites, the port has an ambitious masterplan to deliver additional deepwater berthing and quayside facilities.

INTERNATIONAL TESTING SERVICES



Young Business of the Year hires two trainees to support renewable energy projects

Though new to the field, International Testing Services (ITS) is growing quickly in the renewables sector. So far, the company has supported several offshore wind projects including Dogger Bank, Baltic Eagle, Hollandse Kust Zuid, Neart na Gaoithe and Hywind Tampen. ITS has also supported other innovative green energy projects

such as the Mocean Energy Blue X wave converter and other innovate renewable energy projects.

With the success of several new projects under its belt, ITS was presented with the Young Business of the Year award at the 2022 Courier Business Awards.

Committed to the development of the Scottish workforce, ITS has recently added two trainees to its workforce.

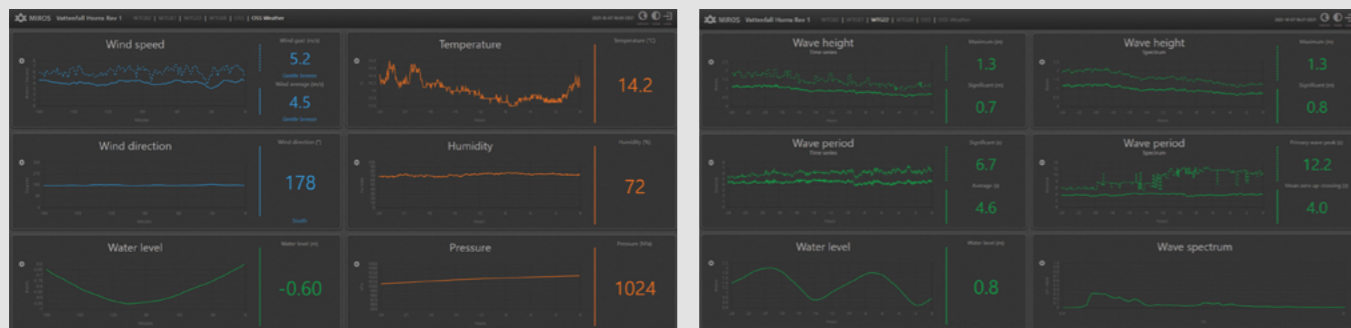


“ABERDEEN’S EXPANDED PORT WILL CREATE POSSIBILITIES ON THE DRIVE TO NET-ZERO, UNDERPIN THE NATION’S ENERGY TRANSITION AND BOLSTER INTERNATIONAL TRADE, WHICH ALL HELPS TO FULFILL OUR PURPOSE OF CREATING PROSPERITY FOR GENERATIONS”

Bob Sanguinetti, Chief Executive, Port of Aberdeen

“INSTALLING SMART DRY SENSORS ACROSS A WIND FARM PROVIDES ALL STAKEHOLDERS WITH INFORMATION ON THE VARIATION IN ENVIRONMENTAL CONDITIONS ACROSS THE ENTIRE SITE. THIS DATA ALLOWS FOR MORE INFORMED DECISION-MAKING ON VESSEL DISPATCH, REDUCTION OF SAFETY RISKS TO IMPROVE PLANNING AND EFFICIENCIES FOR TRANSFER OPERATIONS AS WELL AS SAVINGS ON OPERATIONAL COSTS.”

Maggie McMillan, VP – Renewables,
Miros Group



Ocean and weather insights to optimise offshore operations and maintenance activities

Miros provides sea state and weather data as a service to the global offshore and maritime sectors. Real-time knowledge of offshore conditions can contribute substantially to the safety, performance and efficiency of offshore operations as well as operational cost reduction and decision making.

The company delivered recent work for Vattenfall on the Horns Rev1 project. Following an assessment,

Miros installed five dry, internet-connected wave radars as well as a multi-parameter weather sensor strategically spread over the wind farm. This technology removed the requirement for maintenance by providing a tailored dashboard to improve data access.

This solution generated several benefits for the project including enhanced weather forecasting, optimal vessel access and task planning, reduced aborted vessel trips and CO² emissions, and minimised turbine downtime.

Operational cost modelling by the University of Strathclyde on an offshore wind site with multiple wave radars installed demonstrated an economic benefit of £300,000 to £1 million savings per year.



Local supply chain engagement enables tidal project to thrive

Nova Innovation builds and operates tidal turbines that generate clean electricity from the natural ebb and flow of the tide. The company’s technology has been powering homes in Shetland since 2016 following the deployment of the world’s first offshore tidal array.

Nova’s Enabling Future Arrays in Tidal (EnFAIT) project seeks to make tidal energy a commercial reality by driving down costs and demonstrating the reliability of the technology.

Ensuring strong local content and supply chain spend in local communities is an important goal for everyone at Nova Innovation and the project aims to secure at least 25% local content within the Shetland Tidal Array.

Fantastic local suppliers and local community engagement enabled the project to smash this goal over the initial 18 months, with 60% of supply chain spend deployed to 40 local companies in the Northern Isles.

During January 2023 Nova deployed the fifth and sixth turbines in the Shetland Tidal Array, with more than 40% of forecast expenditure expected to go to firms in the North of Scotland.

Significant economic benefits from the marine energy supply chain are now rooted in Scotland, with international export markets already proving successful. Nova’s turbines are being installed overseas in 2023 in France and in Canada.



“AS HOME TO THE WORLD’S FIRST OFFSHORE TIDAL ARRAY, SHETLAND BENEFITS NOT ONLY FROM BEING AT THE FOREFRONT OF THE GREEN ENERGY REVOLUTION BUT ALSO FROM THE ASSOCIATED ECONOMIC BENEFITS THAT TIDAL ENERGY BRINGS TO THE WHOLE COMMUNITY.”

Angela Maxfield, Business Development Officer,
Nova Innovation

NUDGE TALENT LAB



Carbon neutral software company champions upskilling and facilitates energy transition

Developed to manage energy talent, Nudge Talent Lab aspires to aid the transition from oil and gas to renewables. The carbon neutral company's software allows clients to improve how they engage, attract, assess and hire talent; in turn reducing time, cost and bias.

Dedicated to accelerating its development, Nudge Talent graduated from the Net Zero Technology Centre's TechX Clean Energy Accelerator programme and Scottish Enterprise's Unlocking Ambition accelerator. It was also the first company in the sector to achieve B Corp Certification based on assessment of five key elements: workers, customers, environment, supply chain and governance.

Striving to lead by example, the company is a fair wage employer and is committed to assigning profits to upskill under-represented and disadvantaged groups.

"SCOTLAND HAS ALWAYS PUNCHED ABOVE ITS WEIGHT WHEN IT COMES TO INNOVATION. THE RENEWABLES SECTOR PRESENTS US WITH ANOTHER OPPORTUNITY TO DEMONSTRATE WE HAVE THE INGENUITY, DETERMINATION AND SKILLS TO DELIVER A WORLD LEADING INDUSTRY THAT CAN BE EXPORTED WORLDWIDE. ALL IT NEEDS IS TALENT, AND WE WILL BE THERE TO SUPPORT THEM EVERY STEP OF THE WAY."

Darren Nicol, Founder and MD,
Nudge Talent Lab



ORLO ENERGY



Helping Oil and Gas SMEs evolve into renewable energy suppliers

With 25 years' experience working in the energy sector, and in renewables since 2015, Orlo understands the Scottish economy and supply chain. The company is a business development resource that aids market entry for small and medium sized enterprises (SMEs) transitioning from oil and gas to offshore wind and green hydrogen.

This is achieved through sharing knowledge, providing supply chain value improvement and managing introductions for SMEs with technical solutions for fixed and floating projects.

Orlo has partnered with the Scottish Enterprise Offshore Wind Cluster Builder and Fit 4 Offshore Renewables to develop and grow the offshore wind supply chain across Scotland.

In addition to helping companies grow, Orlo helps them improve their sustainability. This includes undertaking net-

zero measurement for project lifecycles.

The company is currently collaborating to build a bespoke recruitment and interview platform for neurodivergent people and discretionary learning jobs for the Scottish supply chain.



OWC



Growing a Scottish footprint as a springboard to success

OWC, an ABL Group company, is a renewables and energy transition consultant.

With a newly opened office in Glasgow, OWC continues to build on its recent successes in Scotland, having supported more than 20% of successful ScotWind applications in addition to acting as owner's engineer for the West of Orkney Windfarm and two other floating ScotWind projects.

OWC is at the cutting edge of the offshore renewables industry and is growing rapidly within international markets supported by valuable experience and technical skillsets developed in Scotland.

"OWC NOW HAS THREE GROUP OFFICES IN SCOTLAND, STRATEGICALLY LOCATED TO SUPPORT THE GROWING RENEWABLES INDUSTRY. GIVEN SCOTLAND'S POSITION AS A GLOBAL LEADER IN BOTH ONSHORE AND OFFSHORE RENEWABLES, WE CONSIDER OWC'S GROWING PRESENCE IN SCOTLAND TO NOT ONLY BE KEY FOR DOMESTIC SUCCESS, BUT IN ACTING AS A SPRINGBOARD FOR THE COMPANY'S GROWTH ACROSS THE GLOBE."

John MacAskill, Global Managing Director, Renewables,

OWC



PEEL PORTS GROUP



Port commended for sustainability dedication, education and engagement

Clydeport is a network of ports which have the facilities to improve efficiencies in the supply chain. Situated on the River Clyde, King George V Dock supports the development and ongoing maintenance of onshore wind farms across Scotland.

Peel Ports is committed to achieving net-zero by 2040, now having 83% of its van fleet powered by electricity. This electrification has mitigated its annual operational carbon emissions by 335 tonnes.

In collaboration with Mullion Survival Technology, Peel Ports has developed a new life jacket that will

increase survival time in cold water. Following two years of research and development the jacket is now being supplied.

Its dedication to energy transition and sustainability proved successful in a sweep of accolades awarded over the last year. Peel Ports was awarded the Impact Award at Insider Media's North West International Trade Awards recognised as the winner of the 'Sustainability' category at the 2022 Multimodal Awards and became the first UK operator to be awarded the prestigious Gold level membership from the Supply Chain Sustainability School.

These accolades reflected Peel Ports' holistic approach and commitment to sustainability, including a reduction in carbon emissions and its impact on the environment. The company has been similarly commended for engagement and education within its workforce and local community.

PETERSON ENERGY LOGISTICS



Transporting more than 1,000 turbine components for Scottish island onshore wind farms

With more than 50 years' experience in the energy sector, Peterson Energy Logistics is now supporting renewable energy markets with its extensive expertise.

In 2022, Peterson Energy Logistics was awarded a significant contract to support onshore development of the Viking wind farm in Shetland. The contract involves offloading, storage and transportation services for more than 1,000 wind turbine components.

This builds on Peterson's existing renewables experience, where the company is supporting the transformation platform for Hollandse Kust Noord offshore wind farm with a comprehensive range of logistics services. This follows a previously-won contract from Petrofac to support the offshore installation phase of two 700MW transformation platforms for TenneT's Hollandse Kust Zuid offshore grid. Peterson has also formed a joint venture company with Coast Renewable Services to expand its scope of services further.

The new company, Coast Offshore, will provide a comprehensive range of technical solutions to support offshore wind farms throughout the energy lifecycle.





PINNACLE BUSINESS SOLUTIONS



Reducing complex renewable energy project costs through information systems

Pinnacle Business Solutions is an information systems consultancy established in 1995 with a primary focus on engineering and construction.

With origins in the offshore oil and gas business, Pinnacle now assists major contractors to successfully deliver offshore wind infrastructure projects.

Its MatriX-EPS (Engineering Project Support) project management system enables companies to significantly reduce costs and improve efficiency on complex projects and was recently used on SSE Renewables' Seagreen offshore wind farm to support all fabrication and construction associated with the project's offshore substation topside, jacket foundation and piles.



MatriX-EPS has been used to support major projects overseas, including offshore wind farm developments in the Netherlands and Taiwan.

The system is also a tool for asset management practices where it is used to oversee the equipment and materials deployed on inspection and maintenance projects.

PROSERV



Disruptive monitoring technology to support offshore wind cable assets

Aberdeen-based Proserv is employing independent control system intergeneration capabilities and its subsea experience to aid sustainable energy generation.

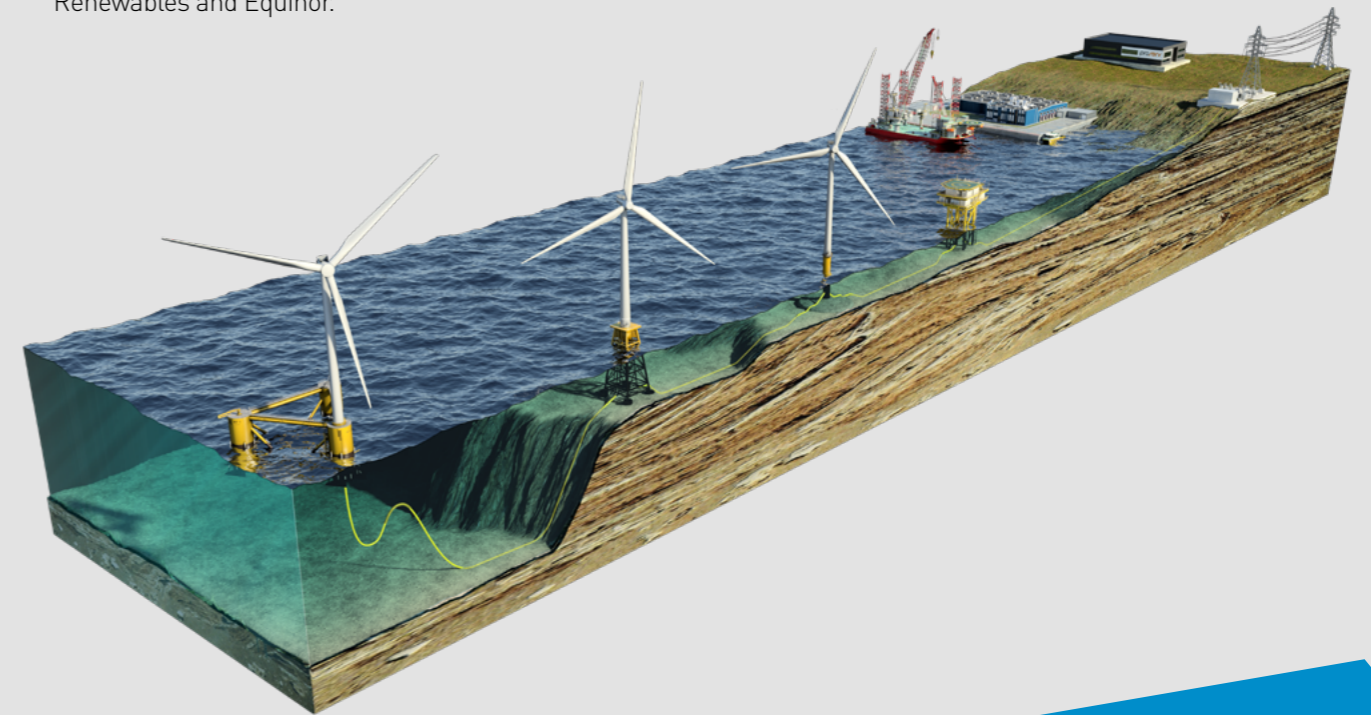
Through a collaborative technology consortium with Synaptec and BPP Cable Solutions and supported by the Offshore Renewable Energy Catapult, Proserv has pioneered an innovative holistic cable monitoring system for the offshore wind market, ECG.

Early in 2022, the company earned a landmark deal for ECG on the Dogger Bank offshore wind farm. In addition, the company is deploying ECG's full-scale hardware, software and data analytics abilities on Equinor's Hywind Scotland floating offshore wind farm.

The monitoring system provides real-time insights on the integrity and condition of cable assets, allowing operators to maximise transmission, improve efficiencies and reduce potential failures. The system's relevance in addressing a critical industry need around cable performance has led to sponsorship from ScottishPower Renewables and Equinor.

"PROSERV'S RENEWABLES METHODOLOGY COMBINES OUR LONG-STANDING HERITAGE IN CONTROL SYSTEM AND INTEGRATION EXPERTISE WITH THE SKILLSETS OF OUR PARTNERS, INCLUDING SCOTTISH TECHNOLOGY START-UPS, TO INNOVATE TRULY IMPACTFUL DIGITAL SOLUTIONS FOR OFFSHORE WIND."

Paul Cook, Vice President, Renewables,
Proserv



REBLADE 

Repurposing projects save 100 tonnes of wind turbine waste headed for landfill

Launched in summer 2021, ReBlade has quickly established itself as the UK's go-to blade expert, developing innovative ways of handling, managing and repurposing decommissioned blades.

With the first-generation wind farms either at or coming to the end of their useful lives, a solution for sustainably managing turbine blade waste has been urgently needed. Though in its infancy, ReBlade has diverted 100 tonnes of blade waste from landfill, designed and made more than 20 prototype products and secured Innovate UK funding to help turn turbine blade waste into public realm infrastructure. Designs have included blade tip benches, speaker podiums made from blade edges and bike shelter canopies repurposed from turbine blades.

"BY INVESTING IN PIONEERING SOLUTIONS NOW, OUR INDUSTRY WILL BE WELL PREPARED TO ENSURE THAT WHOLE-SITE DECOMMISSIONING IS UNDERTAKEN IN A RESPONSIBLE MANNER. REBLADE IS PROUD TO BE WORKING WITH FORWARD-THINKING OWNER-OPERATORS, DEVELOPING PRACTICAL, SCALABLE SOLUTIONS THAT ARE PROVIDING A CIRCULAR, SUSTAINABLE DESTINATION FOR BLADE WASTE."

Fiona Lindsay, Director, ReBlade



RENEWABLE PARTS 

Supply chain management company, building a circular economy and promoting the development of skills across Scotland

Renewable Parts provides parts, consumables and components to the wind industry and is working to support the continued development of renewable energy. The company has effective storage and stockholding capability in Renfrewshire and a first of its kind circular economy solution in Lochgilphead.

At its facilities, the company employs locally with an 'attitude over experience' ethos, working to promote skills to those of school leaving age, as well as people looking to move into renewable energy from other industries, such as oil and gas.

This has enabled Renewable Parts to increase employment in areas of population decline, reduce the amount of carbon emissions in wind farm operations and divert waste and scrap away from landfill.



"COMPLETING THE FINAL FOUNDATION CONCRETE POUR IS A MASSIVE ACHIEVEMENT FOR THE VIKING PROJECT. TO HAVE NOW REACHED THIS MILESTONE IS TESTAMENT TO THE HARD WORK OF ALL INVOLVED, NOT LEAST THE LOCAL CONTRACTORS WHOSE ISLAND EXPERTISE WAS ESSENTIAL TO THE SMOOTH RUNNING AND PROGRAMMING OF THE WORKS"

"WE LOOK FORWARD TO WELCOMING VESTAS ONTO THE PROJECT FOR THE TURBINE INSTALLATION AND THE CONSTRUCTION COMPLETION OF VIKING ENERGY WIND FARM."

Ryan MacLean, Project Manager, RJ McLeod

RJ MCLEOD 

Investing in Scotland's onshore wind workforce

Renewable energy has enabled civil engineering business RJ McLeod to invest in the Scottish workforce, and that of its supply chain.

For example, through its civils and cable work at SSE Renewables' 443MW Viking wind farm in Shetland, RJ McLeod continued to contribute to the community, with a third of its 200-strong workforce being local to

the island. More than 70 local suppliers are also supporting the company to deliver work on the Viking project.

The business has heavily invested in training existing employees as well as local new starts and subcontractors for the project to ensure work is carried out safely and to a high standard.

With roots dating back to the large hydro schemes of the 1950s, RJ McLeod now has more than 100 Scottish onshore wind farm projects under its belt – an impressive 3,850MW constructed or in construction since 2005.



Using intelligent, creative communications to inform stakeholders of offshore wind farm milestones

The Neart na Gaoithe offshore wind farm team decided early in the project's planning process to locate its Operations & Maintenance (O&M) base at Eyemouth Harbour in Berwickshire.

Spreng Thomson worked alongside EDF Renewables' in-house communications team to publicise the O&M base's official opening by Michael Matheson, Scottish Net Zero, Energy and Transport Secretary, in January 2023.

Invited guests from across the Scottish supply chain were there to witness the opening, with the specially commissioned stainless steel plaque, featuring a 10cm cross section of the wind farm's subsea export cable, taking centre stage.

The opening attracted television, radio and print media coverage, focusing on the O&M base's economic boost to the area, providing up to 50 permanent jobs over the 25-year lifespan of the project. Additional benefits will see training, retraining and apprenticeship opportunities available to the residents of Eyemouth and the surrounding area.

The principal communication objective of demonstrating the importance of the Scottish supply chain to NnG was achieved with significant TV and radio coverage, alongside trade media exposure and heavy social media traffic.



STORTERA

Smart grid innovation with novel flow battery technology

StorTera is an energy storage innovator aiming to develop a truly sustainable and low-cost battery.

In 2022, StorTera demonstrated its smart grid technology in a collaborative UK-Canada government initiative, successfully winning the \$1 million grand prize. Its innovative battery demonstrator utilises AI-based controls to optimise distributed lithium-ion energy storage and provide benefits to energy utilities as well as homeowners and businesses.

The company installed a prototype flow battery for Perth and Kinross Council where the AI controls divert excess solar generation to smart heaters and electric vehicle chargers. Performance is optimised by predicting solar generation levels from weather data while income is created by selling power to the grid at times of low demand.

To further its storage innovation, StorTera secured £5 million phase 2 funding under the Longer Duration Energy Storage Demonstration competition funded by the UK Government. A 200kW commercial flow battery demonstrator will be installed at Midlothian Innovation Centre in 2024. This project will enable growth of the team from 14 to 28 people as well as expansion of the StorTera research and development facility.



"IF SCOTLAND WANTS TO MEET ITS NET-ZERO TARGETS IT IS VITAL THAT WHEN THE WIND ISN'T BLOWING AND THE SUN ISN'T SHINING THAT ENERGY CAN BE STORED AND RELEASED TO THE GRID. AS THE TEAM AT STORTERA GROWS WE LOOK FORWARD TO REVOLUTIONISING ENERGY STORAGE IN SCOTLAND."

Dr Gavin Park, CEO,
StorTera



Installing more than 3,800km of cable and delivering offshore energy transition solutions

Diversifying into offshore wind in 2009, Subsea7 has delivered more than 10GW of renewable energy infrastructure, including more than 1,400 foundations and 3,800km of cables. In Scotland alone, the company has supported more than 3GW including the engineering, procurement, construction and installation of foundation and cable packages on the Beatrice and Seagreen offshore wind projects.

The company has also installed dynamic cables for Hywind Scotland, the world's first floating wind farm. Furthermore, Subsea7 has a joint venture partnership

with Simply Blue Group and Ørsted on the 100MW Salamander development and is installing the first carbon capture utilisation and storage pipeline in the North Sea. It is also supporting developers with hydrogen studies.

Subsea7, alongside SSE, is a founding member of the Powering Net Zero Pact which aims to promote a fair and just transition. Subsea7 is targeting net-zero greenhouse gas emissions by 2050 and is working with Xodus to develop an estimating tool to measure the environmental impact of its products and solutions. Carbon reduction activities include the hybridisation of vessels, electrification of fabrication activities and the digitalisation of operations.



"WE ARE DEEPLY COMMITTED TO MAKING POSSIBLE THE GLOBAL DELIVERY OF OFFSHORE ENERGY FOR TODAY AND TOMORROW, SUPPORTING OUR STAKEHOLDERS TO ACHIEVE THEIR ENERGY TRANSITION GOALS."

Liam Macintyre, Energy Transition
Strategy Director,
Subsea7

SYNAPTEC



Unique sensor technology reduces offshore wind industry's biggest operational cost

Subsea power cable failure is the offshore wind industry's biggest operational cost with cable failures typically resulting in months of lost production, potential fines and repair costs.

70% of these failures occur in cables that connect wind turbines to the offshore array and to the grid onshore. Despite this, cables have not been monitored due to their inaccessibility, lack of space and the high cost of conventional monitoring technology.

To combat this challenge, Glasgow-based Synaptec worked with the Offshore Renewable Energy Catapult and Vattenfall to retrofit its passive sensor technology to a pair of export cables. This permanent monitoring provides earlier warning of cable failure in more locations than any other technique. The live data stream offers projects improved availability and safety by optimising scheduled maintenance and avoiding outages over the project lifespan.

"THE SUCCESSFUL DEPLOYMENT OF SYNAPTEC'S PATENTED TECHNOLOGY DEMONSTRATES THE VALUE OF SYNCHRONISED ELECTRICAL AND MECHANICAL DATA ON CRITICAL CABLE ASSETS. CONTINUOUS, AUTOMATED INSPECTION OF REMOTE ASSETS REDUCES OPERATIONAL COST, FAILURE RATES AND WORKER EXPOSURE HOURS, AND AS A RESULT WE ARE EXPERIENCING A RAPID INCREASE IN GLOBAL DEMAND FOR DISTRIBUTED ELECTRICAL SENSING ON OFFSHORE ASSETS."

Philip Orr, Managing Director, Synaptec



Following this work at Vattenfall's Aberdeen Offshore Wind Farm, Synaptec has gone on to deploy its technology on further offshore wind farm projects such as Dogger Bank in England.

THREE60 ENERGY



UK's first ship-to-shore power project reduces carbon footprint by 2,600 tonnes a year

Involved in onshore wind operations and maintenance activities for more than 20 years, THREE60 Energy is now expanding its services across Scotland through the acquisition of BJRE. A recent project success, through BRJE, is the major contract for the UK's first ship-to-shore commercial connection as part of the Green Power Project in Orkney.

The power supply system – known as cold ironing – will reduce vessel carbon emissions by 2,600 tonnes a year. Contributions to nitrogen oxides, sulphur oxides and noise pollution will also diminish significantly.

In addition to the Green Power Project, Three60 energy is supporting the renewables sector through a partnership with North East Scotland College. The partnership aims to support aspiring wind turbine technicians and engineers, and provides essential learning during and outside term time, including on-site exposure to wind turbines.

"WE ARE PROUD TO CONTINUE TO INCORPORATE RENEWABLE ENERGY INTO OUR STRATEGIC GROWTH PLANS. OUR RECENT FIT 4 OFFSHORE RENEWABLES STATUS IS TESTAMENT TO OUR TEAM'S DEDICATION TO PROVIDING RENEWABLE AND SUSTAINABLE ENERGY RESOURCES IN THIS TIME OF HEIGHTENED ENERGY SECURITY NEEDS."

Scott Roy, Strategic Development Director, THREE60 Energy



THE OLD LIBRARY



A home away from home for offshore wind workers in the Scottish Borders

In the Scottish Borders, a husband and wife duo identified a demand for business accommodation following the construction announcement of the Neart Na Gaoithe (NnG) offshore wind farm's operations and maintenance base.

The couple were aware of the limited options for suitable accommodation in the area and opened a guesthouse to welcome renewable workers. The guest house has already observed the positive impact that NnG is having on the economy in Eyemouth, providing opportunities for local people that previously would not have been possible. This success has allowed the duo to grow their business to include two new apartments and a cottage.



"THE OLD LIBRARY HAS PROVED POPULAR AND HAS PROMPTED US TO EXPAND INTO OFFERING TWO NEW APARTMENTS IN BERWICK-UPON-TWEED AND A FURTHER COTTAGE IN ANCROFT, WHICH WILL HOPEFULLY BE OPEN IN SPRING 2023."

"HAVING PROJECTS SUCH AS NNG IN THE AREA HAS PROVIDED US WITH THE CONFIDENCE AND SECURITY TO EXPAND OUR BUSINESS AND PROVIDE A HOME AWAY FROM HOME FOR THOSE WORKING IN THE AREA. WE ALSO HOPE TO PROVIDE JOBS FOR LOCAL PEOPLE AS THE BUSINESS EXPANDS, SOMETHING WE ARE BOTH HUGELY PASSIONATE ABOUT."

Brogan Henderson, Owner, The Old Library

TVP FILM AND MULTIMEDIA



Communicating vital safety knowledge to the offshore wind workforce

TVP produces videos and 3D animations, handling the complete production process from initial concept to final product.

With a long history of working in the oil and gas sector, the Aberdeen-based company is now branching out to partner with the renewables industry. Last year, the business produced a 10-minute health and safety induction film for new contractors working on the Neart na Gaoithe offshore wind farm, focusing on life saving roles and personal protective equipment.

This video is invaluable in ensuring the safety of all parties working on the project.



Scottish-headquartered global consulting and engineering company supporting the clean hydrogen revolution

Through consulting, projects and operations expertise, Wood Group is supporting the energy transition, energy security and decarbonisation.

Hydrogen can have very strong clean energy credentials. It can help wind, solar and other sources in the energy mix work together to ensure low emissions and ease supply and demand gaps.

Wood is supporting dozens of clean hydrogen projects around the world and recently completed a ground-breaking study into the export of renewable hydrogen from Scotland

to Germany. This has confirmed the technical feasibility of an export supply chain and is paving the way for solutions which will kick start a whole new sector for Scotland.



Overcoming industry challenges through forward-thinking foundation installation technologies

W3G is an Aberdeen-based project management and installation equipment developer. The company designs installation tools for onshore and offshore wind turbine foundations.

W3G's Foundation Stabilisation Tool (FST) has been in development for five years and is certified by Bureau Veritas. The simple design uses readily available materials and the tool is a low-cost solution for wind turbine installation. The FTS can be manufactured close to wind farm sites, enabling high levels of local supply chain content, and can be deployed without additional port infrastructure. The tool is easily scalable for any foundation size and has been designed with the future of floating offshore wind in mind.

Following a successful trial at the East Anglia offshore wind farm in 2019 the tool has been commercially deployed since 2022.

Further success as owner's engineer on the Kincardine Offshore Floating Wind Farm has seen the company design a near-shore floating offshore wind assembly method. The method can be used without a jack-up vessel and reduces the need for infrastructure upgrades.

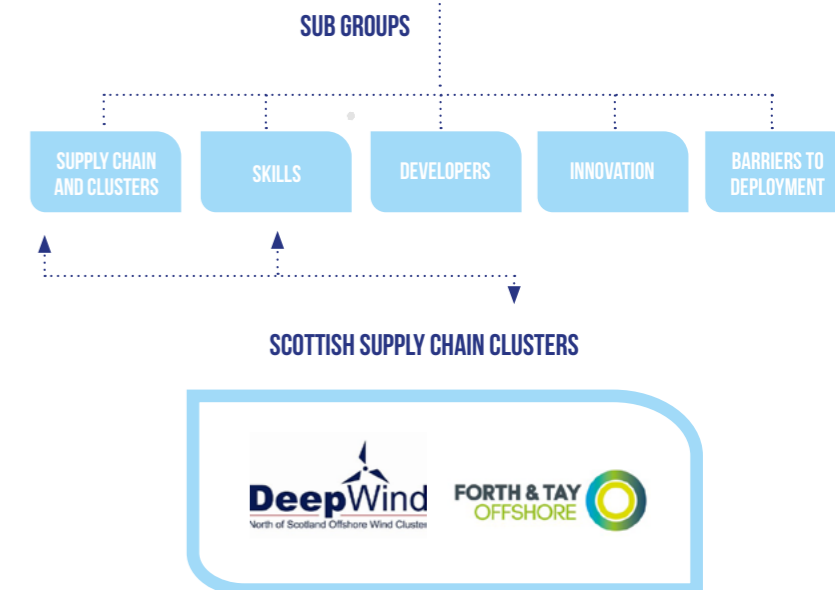


THE SCOTTISH OFFSHORE WIND ENERGY COUNCIL

The Scottish Offshore Wind Energy Council (SOWEC) was formed as a result of collaboration between government and the offshore wind industry.

Co-chaired by The Scottish Government and Brian MacFarlane of SSE, its mission is to coordinate and grow the sector, ensuring that Scottish offshore wind is more sustainable, competitive and commercially attractive, in domestic and global markets.

SOWEC has set several goals to transition to net-zero by 2045 while maximising value to Scotland. These include delivering 10GW of fixed and floating offshore wind in Scottish waters by 2030, developing a highly skilled and diverse workforce and establishing Scotland as a world-class offshore wind sector.



CLUSTERS FOCUS

The Forth and Tay and DeepWind offshore wind clusters were established to drive the growth of offshore energy and represent the Scottish supply chain. They aim to best position Scottish businesses to capitalise on offshore wind opportunities as they arise by supporting a supply chain capable of serving every stage of a project's life. The groups attract inward investment and promote the regional supply chain in order to benefit from projects in the UK both now and in the future.

Support clusters may soon be established for emerging and rapidly-growing technologies such as low-carbon heat and green hydrogen. These groups would strengthen the Scottish supply chain in emerging markets.



UPCOMING EVENTS

MARINE CONFERENCE & DINNER
25 MAY 2023
EDINBURGH

NET-ZERO ENERGY TRANSITION AWARDS
24 AUGUST 2023 | ABERDEEN

ONSHORE WIND CONFERENCE
21 SEPTEMBER 2023
EDINBURGH

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