

SOWEC 2024 ANNUAL REVIEW

# Scotland's offshore wind industry

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## Progress and Potential

# Foreword



**Dr Alasdair Allan**  
**ACTING MINISTER FOR CLIMATE ACTION**  
**SOWEC CO-CHAIR**

Offshore wind is at the heart of both energy and economic policy in Scotland.

ScotWind has given our country a significant advantage in developing offshore wind technologies and supply chain. We are poised to be one of the first nations to deploy floating wind at commercial scale and the Scottish Government, working in partnership through the Scottish Offshore Wind Energy Council (SOWEC), is committed to realising that potential.

We are investing up to £500m in offshore wind over five years, which we expect will leverage additional private sector investment of £1.5bn in the infrastructure and manufacturing facilities critical to growing our offshore wind sector. We have almost tripled our capital funding in offshore wind to £150m in 2025-26.

Offshore wind is a once in a generation economic opportunity for Scotland. It is vital that we ensure the benefits are long-lasting for Scotland's communities, young people and economy.

SOWEC is an invaluable forum which enables joint action so we can maximise every opportunity to deliver benefits for Scotland from offshore wind as part of a just transition to a net zero future.

I am grateful to all who have contributed their time and expertise to the work of SOWEC, past and present, and I look forward to continuing this journey.



**Brian McFarlane**  
**SSE RENEWABLES**  
**SOWEC CO-CHAIR (2019-24)**

This review has offered an opportunity for me to take stock and look back on what SOWEC has delivered over the past 12 months and what we are poised to achieve in the years to come.

Numerous key initiatives have been rolled out, from funding and publishing research that will support developers and policy makers to make informed decisions, to the launch of a new national cluster for Scotland. Practical action that has tangible impacts on how we move forward.

There are undoubtedly challenges that still need to be addressed but we are clear on where these lie and that action needs to be taken. Continued collaboration between the public and private sector, between developers and the supply chain, and between our industry bodies will be vital.

My thanks to everyone who has supported SOWEC during my time as industry co-chair. As I step down from the role, I look forward to seeing the Council and the industry advance as they continue to work together to achieve the sector's significant potential.



SOWEC

# Offshore wind ambition

## Vision

A world-class offshore wind sector that underpins the transition to net zero by 2045 and maximises the value to Scotland

## Mission

To coordinate and grow the sector, ensuring the Scottish offshore wind industry is more sustainable, competitive, and commercially-attractive, both domestically and in the global offshore wind market

## Our goals

- ◆ Deliver 11GW of fixed and floating offshore wind in Scottish waters by 2030
- ◆ Establish Scotland as a world-class offshore wind sector at the leading edge of technology innovation, driving excellence in efficiency, productivity, safety, and sustainability
- ◆ Support a transformational and rapid increase in economic value, delivering a world-class supply chain in Scotland
- ◆ Develop a highly skilled and diverse workforce, support new entrants, expand apprenticeships, and enable transitioning from existing sectors whilst inspiring the future talent pipeline and increasing participation by currently underrepresented groups
- ◆ Champion floating and fixed offshore wind's contribution to achieving Scotland's net-zero commitment by 2045, incorporating the oil and gas transition, hydrogen, and wider energy system integration
- ◆ Overcome barriers to the deployment of offshore wind in Scottish waters, working with stakeholders to accelerate the delivery of key enabling infrastructure to achieve 2030 and 2045 commitments, that will contribute to a just transition
- ◆ Promote collaboration with relevant stakeholders which aims to ensure offshore wind infrastructure deployment has a positive net gain to biodiversity in Scotland and the marine environment



PMO REVIEW

# Delivering our strategy

2024 was an important year for SOWEC, marking five years since the Council was established. The PMO team has worked hard to support the functioning of the workstreams: facilitating funding and decision-making, joining up conversations and expanding our communications role.

Over the year we have said goodbye to some long-standing SOWEC representatives and welcomed some brilliant new leads. The PMO team wants to thank Brian McFarlane (SOWEC co-chair), Jim Brown (Skills lead), Scott Hamilton (Supply Chain lead), Andy Jamieson (Innovation lead), and Maf Smith (comms support) for all their hard work and support.

*and Opportunities for Offshore Wind.* CES also contract and fund our fantastic communications agency 3x1, who started their work in July.

## Governance

Building closer links with the Offshore Wind Industry Council (OWIC) has been a focus for the PMO this year. We have established new ways of working with the team and identified areas for better alignment. Work to improve communication and alignment between SOWEC and OWIC will continue - whilst maintaining SOWEC's core purpose of supporting the Scottish sector.

## Projects

We started the year deep in the work of the CEMNID project, funded by Crown Estate Scotland and bringing together Government agencies and developers to explore best practice in mitigation and 'nature inclusive design'. This collaborative project stands out as a great example of what SOWEC aims to achieve. The outputs were published in August, receiving worldwide interest and great coverage, and winning the Sustainable Development Award category at the Scottish Green Energy Awards.

Projects approved via the SOWEC Treasury (funded by Scottish offshore wind projects) included a package of skills outreach at events, a new skills portal website, a Barriers to Deployment group wet storage project and ornithological support work.

The PMO also supported the SOWEC Supply Chain group in running a process to appoint a Cluster Management Organisation to establish a new national supply chain cluster for Scotland. Scottish Renewables were appointed in December, launching 'The Clean Energy Cluster' in January 2025.

Other CES funded projects in 2024 included the *SOWEC Innovation Guide*, published in January 2025, and a scoping report for a *National Assessment of Socio-Economic Issues*

## Outlook

Five years in, we believe there is much to celebrate from SOWEC's role in bringing together those with an interest in Scotland's offshore wind ambitions. Developer representation across workstreams is stronger than ever, reflecting the huge increase in activity post-ScotWind and INTOG leasing. At least 27 offshore wind developer projects have given funding to shared projects through the Developers Forum.

Similarly, Scottish Government and agencies continue to step up their support of the sector, with a new Offshore Wind Directorate at its heart. The PMO team look forward to supporting SOWEC as it moves into the next chapter delivering against Scotland's offshore wind potential.

**Ben Miller**  
**PMO LEAD**

*With thanks to all members of the PMO team who contribute their time and expertise.*



UPDATE

# The Strategic Investment Model

## Purpose

Significant infrastructure upgrades are required to deliver Scotland's offshore wind pipeline, particularly across our ports and harbours. In addition, we need to support our supply chain to invest and innovate to take advantage of the opportunities the sector offers.

The Strategic Investment Model (SIM) builds a shared view of need. By working collaboratively across industry and the public sector, effort and investment can be pooled and risks shared to help these essential infrastructure projects to reach final investment decision and be in place in time to support Scotland's offshore wind build out.

## Progress

At the start of 2024, 38 port and supply chain projects with a combined potential capital value of £6.5bn successfully completed Stage 1 of the SIM process.

Key achievements in the following 12 months include:

- ◆ In January, SIM participation was extended to Innovation and Targeted Oil & Gas (INTOG) projects to join ScotWind and other projects in demonstrating their commitment to the SIM
- ◆ All 38 Stage 1 projects received advisory feedback on their propositions and have been supported in engaging with developers
- ◆ 10 priority projects have been selected for Stage 2 – five port facilities, four supply chain proposals and one equipment project – and all have been offered facilitation support to progress their projects
- ◆ A further 19 proposals have been categorised as progress projects as part of Stage 2 and were supported to self-facilitate engagement with developers
- ◆ A marketplace event was hosted for the progress projects to engage directly with key stakeholders
- ◆ The SIM won the Industry Challenger Award at the Scottish Renewables Green Energy Awards and our SIM working group chair Gillian Morrison was recognised with the Offshore Wind Collaboration Award at RenewableUK's Offshore Wind Awards

A summary of all SIM projects is available on the [SOWEC website](#).



Moray West TPs at Port of Nigg | Image credit: Global Energy Group



## SUBGROUP

# Barriers to Deployment

### Purpose

The Barriers to Deployment group aims to coordinate action to address environmental and economic constraints affecting the development of offshore wind in Scotland.

The group is chaired by Colin Palmer, director of Offshore at Scottish Renewables. It works collaboratively with industry, government and stakeholders to identify opportunities that could help speed up the consenting process of offshore wind projects to support Scotland in reaching its net zero targets. These opportunities range from developing proportionate processes and policies with clear guidance to ensuring the correct resources, knowledge, and understanding are available to then apply these properly.

### Progress

The group operates from a detailed actionable roadmap plan underpinned by a risk register prioritising challenges to offshore wind deployment in Scotland, dovetailing with OWIC's Pathways to Growth 'Focus Areas' for a coordinated approach.

Positive progress has been made with its 2024/25 roadmap and key achievements are outlined below.

#### Steering offshore policy

The group has supported coordinated industry responses to several consultations including:

- ◆ Sectoral Marine Plan and Iterative Plan Review
- ◆ Marine Protected Areas and Fisheries Management
- ◆ Nature Inclusive Marine Structures
- ◆ Marine Recovery Fund and Scottish Marine Recovery Fund
- ◆ Marine Nature Restoration
- ◆ National Marine Plan 2
- ◆ Wet Storage, Inshore Anchorage and Assembly of Turbines
- ◆ Sandeel Fishing
- ◆ Improving Inshore Fisheries
- ◆ Habitat Regulations Implementation
- ◆ Scottish Seabird Conservation Action Plan



Beatrice Offshore Wind Farm | Image credit: HIE

### Roundtables and workshops

A wide range of roundtables and workshops have been delivered and supported covering vital topics including efficient resources and processes, systems mapping, wet storage and inshore anchorage, and offshore wind and fisheries coexistence solutions.

### Strategic compensation workshops

Scottish Renewables facilitated a Barriers to Deployment workshop led by the Scottish Government's Marine Directorate to provide initial input to the Marine Nature Enhancement Team's development of a strategic compensation and nature-positive policy and guidance for the offshore wind sector. Issues were discussed, and actionable next steps were agreed in developing the policy and supporting guidance, including a further series of workshops.

### Fisheries and renewables awareness days

Two fisheries and renewables awareness days were delivered in collaboration with the Scottish Fishermen's Federation and Ocean Winds. They provided an opportunity to explore how both the offshore wind industry and fisheries navigate the seas and how to foster a dialogue to resolve existing issues.

They were coordinated as part of the Barriers to Deployment group's coexistence workstream. The key takeaways were the importance of transparency and early engagement, and the need to develop stronger relationships and better understanding between the two industries.

Fishing and offshore communications guidance has also been developed for the renewables industry to ensure a joined-up approach when communicating about working in Scotland's shared waters.

### Industry representation

The group is active in engaging with relevant policy areas on the industry's behalf. This includes calling on the Scottish and UK governments to take urgent action to ensure issues around strategic compensation, Energy Act 2023 secondary legislation, and defining the role and structure of the Scottish Marine Recovery Fund in tandem with a UK-wide Marine Recovery Fund are addressed to support the offshore wind pipeline in Scotland. Ongoing engagement is taking place with both administrations to move forward these critical areas.

### Ornithology research

SOWEC funding has been deployed to contract MacArthur Green to identify, facilitate and support the delivery of actions and solutions to reduce offshore ornithology risks. The contractor has been working closely with industry, the public sector and other stakeholders. In addition to extensive engagement with the Scottish Renewables Ornithology Task and Finish Group, wider industry and stakeholders, most recently, Scottish Renewables and the group have published a report entitled [SR/SOWEC Streamlining Ornithology Impact Assessments: What Changes Would be Beneficial?](#)



## SUBGROUP **Innovation**

### **Purpose**

Innovation underpins the Scottish offshore wind sector's global competitiveness. The Innovation group aims to increase the amount and impact of research, development and innovation (R&D&I) in Scotland focused on offshore wind. This will deliver cost reduction, accelerated deployment and enable Scottish offshore wind projects to increase local content.

The group includes representatives of Scotland's academic, research and innovation organisations and collaborates with the Developers Forum, Skills and Supply Chain and Clusters groups, and external stakeholders to support strategic planning and coordination of innovation activities.

### **Progress**

In 2024, the Innovation group appointed a new chair – Andy Macdonald of ORE Catapult – and co-chair, Alex Loudon from Ørsted. Its innovation working group was restarted with a broader membership of developers and delivery partners including the National Manufacturing Institute Scotland (NMIS), the Net Zero Technology Centre (NZTC), the University of Strathclyde, Scottish Enterprise and Highlands and Islands Enterprise. ORE Catapult has provided resource to lead the group.

### **Innovation guide**

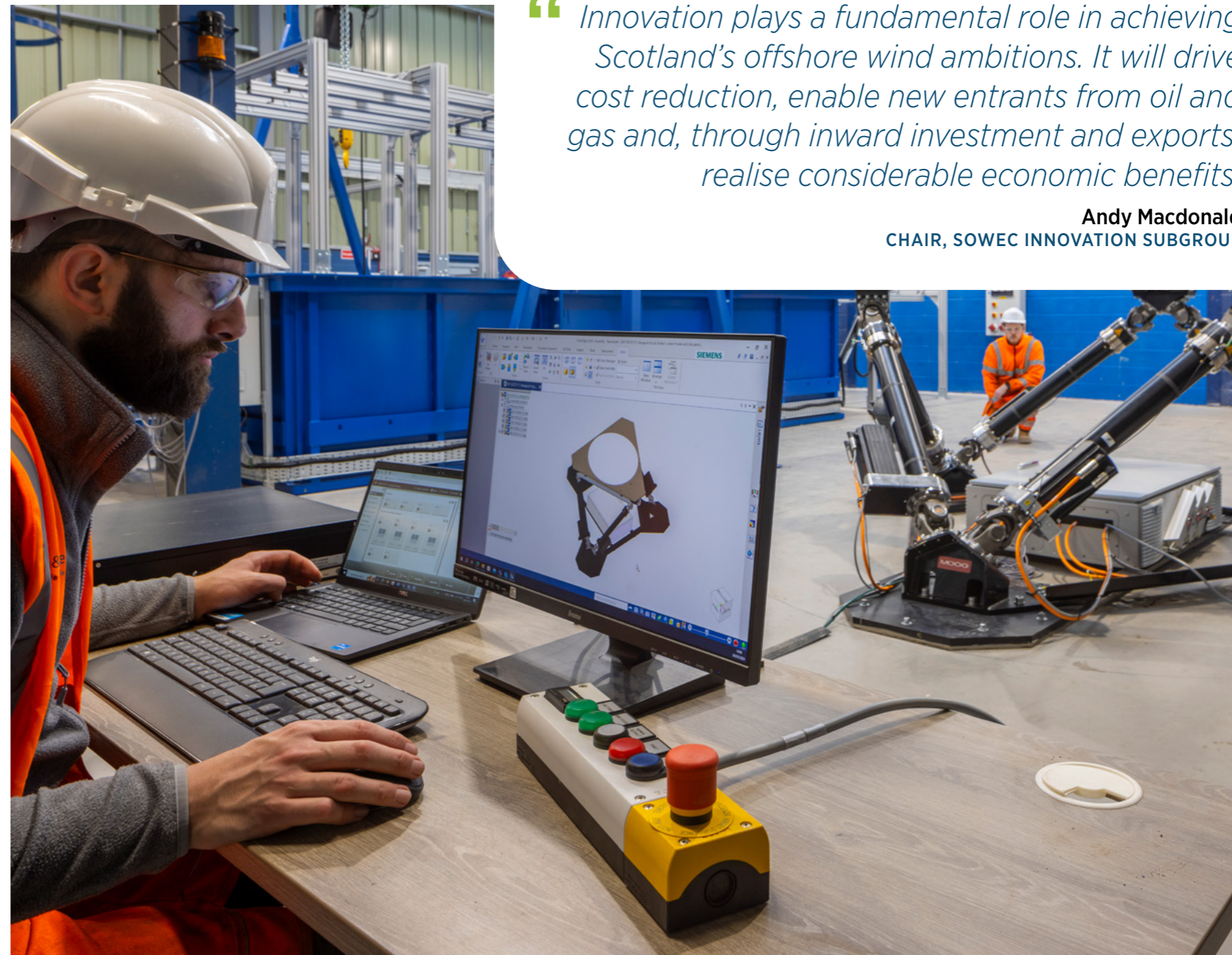
The *SOWEC Innovation Guide* demonstrates how offshore wind developers can use innovation projects to help grow Scotland's supply chain and speed up delivery.

Developed in partnership with ORE Catapult, the guide highlights the cutting-edge innovation happening right across Scotland's offshore wind industry, including undersea cabling surveying, drone turbine inspections, and subsea battery storage. It showcases 20 best practice projects that have already shown positive results.

The guide was launched at the Offshore Wind Conference in January 2025 and is available to download from the [SOWEC website](#).

### **Innovation support programmes**

Group members have supported the development of Scottish Enterprise's CAN DO pilot offshore wind innovation funding, helping shape its priority target areas. This collaboration will continue in 2025 to develop a longer term programme.



Hexapod motion simulator system at ORE Catapult's FLOWIC Facility in Aberdeen | Image credit: ORE Catapult

“ *Innovation plays a fundamental role in achieving Scotland's offshore wind ambitions. It will drive cost reduction, enable new entrants from oil and gas and, through inward investment and exports, realise considerable economic benefits.* ”

**Andy Macdonald**  
CHAIR, SOWEC INNOVATION SUBGROUP

In addition, the group helped catalyse innovation related proposals submitted to the North East of Scotland Investment Zone from three member organisations.

### **Innovation processes**

Work is ongoing on an exercise to identify process changes throughout the offshore wind project lifecycle that could encourage and support innovation. It will examine how innovation can be embedded into all stages, for example, leasing rounds and meet the buyer programmes, and make recommendations on practical next steps.



## SUBGROUP Skills

### Purpose

The Skills group was established to work with industry to identify and understand skills demand, ensuring that the sector can secure the right skills at the right time. This will drive engagement with the next generations of talent in Scotland's offshore wind industry by communicating job opportunities and skills requirements within the supply chain.

The group has established strong relationships with further and higher education institutions to ensure there will be clear pathways to job roles within the sector. It also works with other providers and stakeholders to encourage a collaborative approach to addressing the skills gaps the industry faces.

### Progress

The Skills group welcomed a new chair at the end of 2024 with Stewart McKinlay, skills director from the National Manufacturing Institute Scotland picking up the role from Jim Brown of the Energy Skills Partnership (ESP).

The group also appointed an industry deputy chair for the first time from the Developers Forum to ensure supply chain and developer needs are addressed.

Several new working groups were established to drive forward key strands of the Skills group's activity plans, with representatives from education establishments, skills organisations, developers, supply chain and government. These include an education and skills working group and a sector attractiveness and recruitment working group.

### Career Opportunities and Skills Guide

Produced in partnership with Skills Development Scotland, [the guide](#) highlights the broad range of career opportunities offered by the offshore wind industry as well as identifying critical skills gaps and shortages. It explains practical pathways and training for those considering the sector as a career destination and includes several case studies from across Scotland. The guide has been well received by industry partners and stakeholders.

### Offshore Wind Skills Portal

SOWEC funding was secured for the creation of a skills portal, led by ESP, to help workers across the UK's energy mix, including oil and gas, to find new roles in offshore wind. This is under development in 2025.



Technician at work at ORE Catapult's FLOWIC Facility in Aberdeen | Image credit: ORE Catapult

### Futures in Wind programme

The group is working with the University of the Highlands and Islands to support a new learning programme. The Futures in Wind open learning course will be available online and open access. It will cover a range of topics related to offshore wind farm development, including turbine design, wind farm construction, environmental impacts, and social acceptability.

The course is accessible to a wide audience, with a particular focus on senior phase school students, undergraduate, and early-career graduates with an interest in relevant disciplines such as marine science, environmental science, geography, planning, and engineering. It will allow them to gain a valuable insight into the sector and the career opportunities it presents.

### Careers events

The group regularly attends careers events to engage with prospective graduates, informing them of in-demand skills and showcasing the high quality jobs available in the industry. Events SOWEC has been represented at in 2024 include the Scotland Graduate Fair and the University of the West of Scotland's Careers in Energy, Engineering and Technology Fair.



## SUBGROUP

# Supply Chain and Clusters

### Purpose

The Supply Chain and Clusters group aims to develop a Scottish offshore wind supply chain that is globally competitive, capable, and has the capacity to have success in both domestic and international markets.

The group is focused on activity that will help drive economies of scale, productivity, competitiveness, knowledge, innovation and provide an increased capability for export.

### Progress

Lloyd Duthie of Seaway7 was appointed chair of the Supply Chain and Clusters group in August 2024.

2024 saw the group successfully appoint the Cluster Management Organisation for a new national supply chain cluster for Scotland, delivering on one of its core objectives. A single cluster helps to add clarity to a complex supply chain and ever-changing landscape as the offshore wind sector evolves.

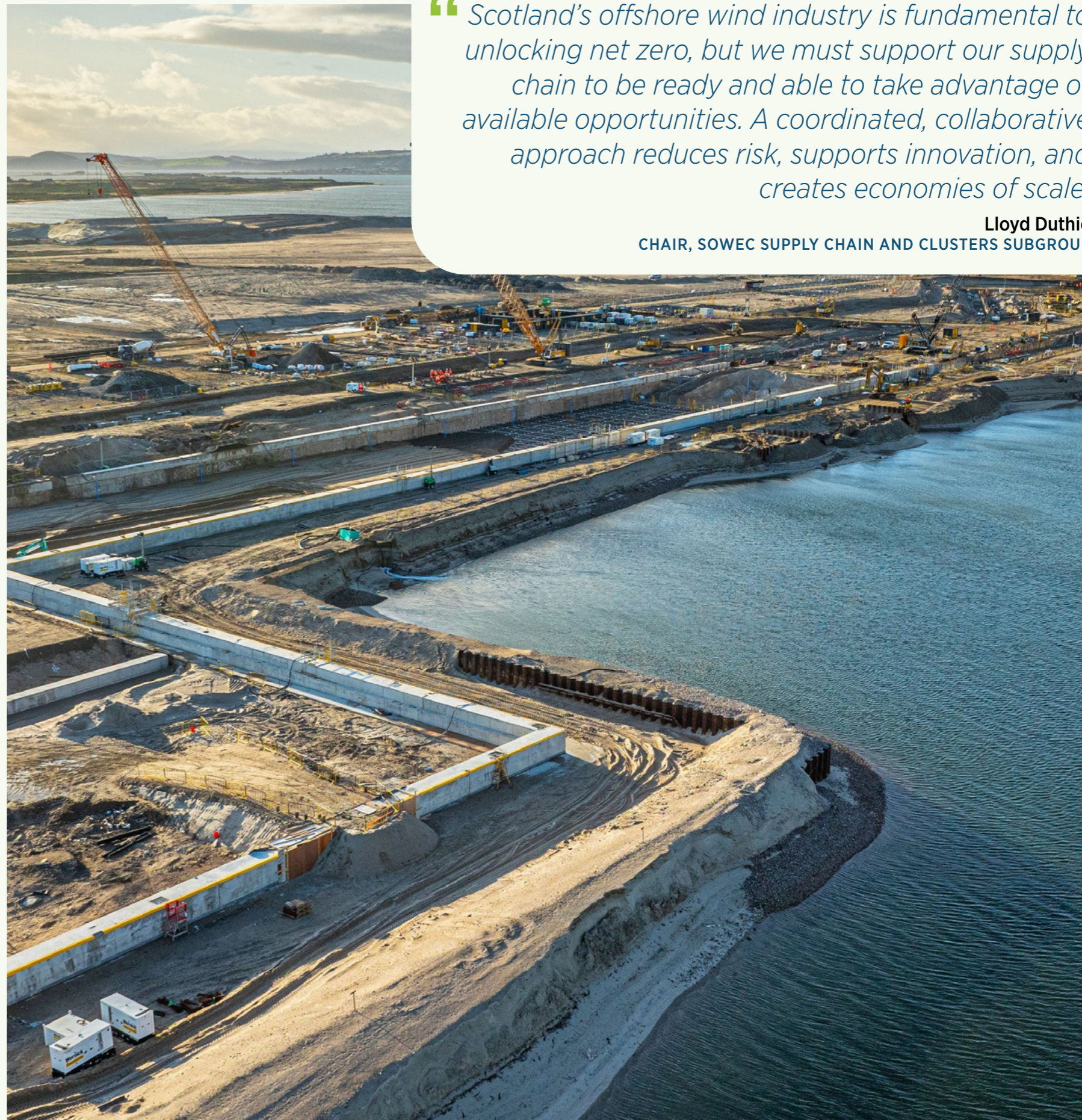
Scottish Renewables was appointed as the CMO in December 2024 and The Clean Energy Cluster was launched in January 2025.

The Clean Energy Cluster will act as the national voice of Scotland's offshore wind supply chain. It will serve as the single point of contact for businesses who wish to engage with the opportunities offered by the sector, representing relevant organisations from across Scotland.

Key benefits of the cluster approach include:

- ◆ Business development opportunities
- ◆ Collaboration and innovation
- ◆ Facilitation of knowledge transfer
- ◆ Economies of scale
- ◆ Shared and reduced risk

The Clean Energy Cluster will promote, connect and guide suppliers who are currently or who wish to engage with the offshore wind sector.



“Scotland’s offshore wind industry is fundamental to unlocking net zero, but we must support our supply chain to be ready and able to take advantage of available opportunities. A coordinated, collaborative approach reduces risk, supports innovation, and creates economies of scale.”

Lloyd Duthie

CHAIR, SOWEC SUPPLY CHAIN AND CLUSTERS SUBGROUP

Haventus Energy Transition Facility at Ardersier | Image credit: Broadwing Media





# SUBGROUP Developers Forum

Mark Baxter, Developers Forum chair, sets out below his reflections on the past year and the work ahead.

## Purpose

The Developers Forum was established to focus SOWEC's activity on the challenges facing the Scottish offshore wind industry and the material changes needed to overcome these.

The forum is examining the elements that need derisked to allow projects to fully mature and ways to work with the Scottish Government and other stakeholders to implement solutions. By working closely with other subgroups the forum ensures an industry lens is applied to all initiatives SOWEC delivers.

## Progress

Developers have witnessed significant strides in Scotland's ambition to become a global leader in 2024 with a huge pipeline of both fixed and floating projects. The Developers Forum has played a crucial role in fostering collaboration and driving progress, acting as a vital conduit between industry, government, and stakeholders.

## A foundation for growth

Developers with projects in ScotWind and the INTOG leasing rounds have demonstrated commitment to large-scale offshore wind development, attracting substantial investment and setting the stage for a transformative expansion of capacity. This has provided a platform for stakeholders to focus on the strategic enabling activities and investment necessary to deliver on the offshore ambition set by Scottish Government.

Developers have come together and made clear the areas that need to be worked on in collaboration with government to unlock investment, with a focus on derisking deployment of projects to enable them to move from development into financing, construction and 30 plus years of operation. A volume of offshore wind projects in delivery and operation are required to ensure a fair and just transition; developers are committed to working with government as the policy environment evolves.

Scottish projects are competing in a UK market making it a critical time for governments to ensure that these projects are competitive and not unfairly burdened with additional cost requirements in comparison to projects elsewhere in the UK.

In the short term, the focus needs to be on a stable, and clear, Scottish and UK policy environment that actively encourages offshore wind in Scotland, with an energy market that underpins it. Anything less could be counterproductive to Scotland's ambitions, slowing the economic benefit that will ultimately flow from a volume of successful deployments.

## Potential

The future of both fixed and floating offshore wind in Scotland is bright, but it requires continued collaboration and decisive action within, and outwith, SOWEC. The Scottish Government's ambitions for offshore wind deployment provide a strong policy framework.

## From discussion to delivery

Achieving Scotland and the UK's offshore wind target now hinges on delivery:

- ◆ **Delivery of grid infrastructure**  
Upgrading and expanding grid infrastructure, on time, is crucial for connecting new offshore wind farms to the National Grid. SOWEC must work closely with network operators to ensure timely and efficient delivery of grid connections.
- ◆ **Delivery of spatial planning**  
Clear and consistent spatial planning is essential for balancing offshore wind development with other marine activities.
- ◆ **Delivery of consenting reform**  
While progress has been made, streamlining the consenting process remains a priority for the Developers Forum. We need a more efficient and predictable framework to enable project delivery and reduce development timelines. In particular, the ability to apply a broad range of strategic compensation becomes a material framework that need to be in place.
- ◆ **Delivery of supply chain investment**  
In a UK energy market maximising local content is essential for creating sustainable economic benefits. SOWEC should continue to work with the SIM, and Scottish Government funding, in unison within the new framework emerging from the CfD reform. It is critical that the domestic supply chain is strengthened and available for projects to contract with.

## Future priorities

While some levers are not in SOWEC's control, there are aspects that are material to the successful deployment of fixed and floating projects in Scotland. Working with Scottish Renewables a laser focus is required on:

- ◆ **Transmission charges**  
The current grid connection charging regime is unfair to Scottish projects and can create significant financial barriers for developers. It is an area that requires close attention from SOWEC to ensure competitiveness.
- ◆ **Energy market reform**  
A decision is required on the direction of REMA; the current uncertainty is preventing projects understanding the value of their investments. It is clear that Scottish projects are acutely affected by any major change in energy.
- ◆ **Contract for Difference (CfD) reform**  
The frequency and design of CfD allocation rounds are critical for providing developers with long-term revenue certainty. SOWEC must advocate for a stable and predictable CfD regime that supports the deployment of large-scale offshore wind projects.
- ◆ **National Grid planning**  
The overall UK wide grid needs to be planned with Scotland's vast offshore resources as a key component. This needs strong representation at UK level.
- ◆ **Floating offshore wind support**  
As floating offshore wind technology matures; the Scottish and UK governments need to continue to provide dedicated support for its deployment. SOWEC should advocate for targeted funding and policy incentives to accelerate the development of this promising technology.

Moving forward, the SOWEC Developers Forum will play a pivotal role in facilitating dialogue and driving progress. By working together with government, we can unlock the full potential of Scotland's offshore wind resources and create a just transition for generations to come.



SOWEC

# Outlook and priorities



**Claire Mack**  
**SCOTTISH RENEWABLES**  
**INCOMING SOWEC INDUSTRY CO-CHAIR**

SOWEC is an absolutely critical industry and government interface to enable us to identify and solve the issues needed to deliver Scotland's offshore ambitions. As I begin my two-year term as industry co-chair, representing Scotland's offshore wind sector, I do so with optimism, but also pragmatism.

Significant progress has been made, but there are still clear challenges ahead if we are to achieve SOWEC's current goal of 11GW of fixed and floating offshore wind in Scottish waters by 2030 as defined by the existing marine plan.

Looking forward to the coming year there are some key actions we need to take to enable the next steps of Scotland's success in delivering offshore projects. I'm confident that industry, with the backing and support of both the Scottish and UK governments, has the expertise, ability and tools available to do so.

Some of my priority areas for action as I pick up the baton as co-chair are:

- ◆ Working with Scottish Government and industry on developing and publishing updated Sectoral and National Marine Plans to match our heightened ambitions
- ◆ Developing Strategic Compensation Frameworks to enable a smoother and more certain consenting pathway
- ◆ Working with the UK and Scottish governments to make the most of available investment funds to gain and enhance strategic footholds for Scotland's offshore wind supply chain
- ◆ Defining new people and skills models to ensure we have workers in the right place at the right time with the right skills to deliver both offshore wind projects and a just energy transition
- ◆ Coordinating activity with OWIC to strengthen the overall UK position

The contributions and expertise of my industry colleagues across skills, supply chain, innovation and project delivery are second to none and I am grateful to them for their continued input and support in pursuit of our joint aims - to deliver positive environmental benefits and economic growth to Scotland through our phenomenal offshore opportunity.



Seagreen Offshore Wind Farm  
Image Credit: Scottish Enterprise

SOWEC is a partnership between the Scottish public sector and industry to create a world class offshore wind sector in Scotland

Follow us on [LinkedIn](#) or visit our [website](#) to stay up to date on our progress