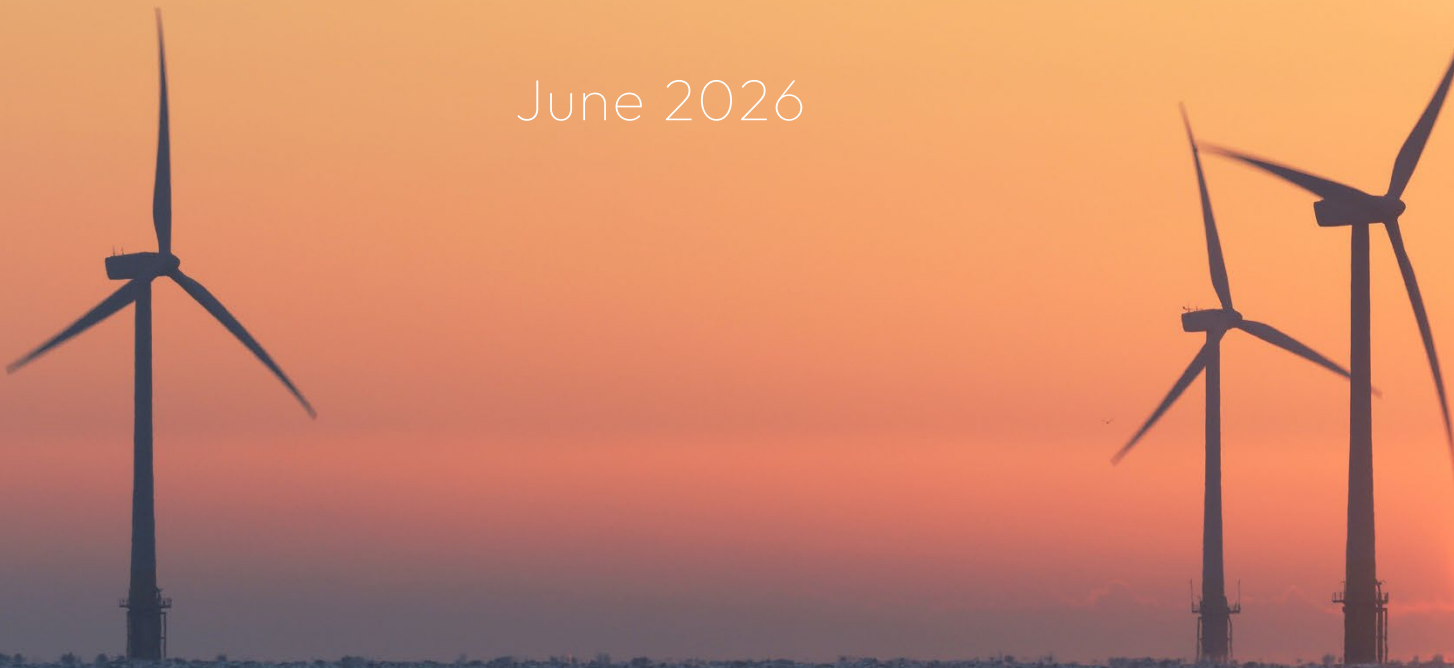




Powering Growth:

Unlocking Offshore Wind Potential in the North East

June 2026



Introduction

The North East of England is strategically positioned to become a national and global leader in offshore wind energy. The UK Government aims to deploy 50 GW of offshore wind capacity by 2030, including 5 GW of floating offshore wind in deeper waters. This programme is expected to power 15 million homes, support 100,000 jobs, and strengthen the UK's position as a global exporter of wind energy technologies and expertise (HM Government, 2022). The North East is well placed to contribute to these ambitions. The region combines a long history of offshore energy and marine engineering with established infrastructure, a deep-rooted supply chain, and favourable geographical assets. Strong support from research, innovation and policy organisations further strengthens this position. Together, these assets create a significant opportunity to support national energy and economic goals, attract manufacturing and port activity, create inclusive employment, and grow the region's offshore wind innovation ecosystem.

Winds of Opportunity: the North East Advantage

The North East is at the forefront of the UK's offshore wind industry, with approximately 550 renewable energy companies and employing an estimated 17,000 people (Energi Coast 2024). Possessing natural and indigenous assets that provide significant strengths and competitive advantage to capitalise on opportunities to grow its offshore wind sector and contribute to national economic and net zero priorities, the North East's core capabilities include:

Port infrastructure and geography

The North East benefits from its proximity to major offshore wind sites, including Dogger Bank and the Sofia Offshore Wind Farm in the North Sea basin. This provides clear market-access advantages and positions the region to capture up to 15 GW of offshore wind investment (DESNZ, 2025). The Ports of Tyne, Blyth and Sunderland, alongside Teesport in the Tees Valley, provide critical infrastructure for the offshore renewables industry. Their maritime capabilities, logistics networks and market access help attract and cluster offshore wind supply chains across the region. These advantages are strengthened by financial incentives and place-based partnerships. One example is the Energy Central collaboration between the Port of Blyth, Northumberland County Council and ORE Catapult.

Embedded and integrated supply chain

The North East's offshore energy and marine engineering sector has adapted through successive waves of industrial change. Over time, regional capabilities have evolved from shipbuilding to oil and gas and, more recently, offshore renewables. The region's supply chain accounts for approximately one-fifth of the UK's offshore wind economy and straddles many of the critical phases of offshore wind – from design, turbine component manufacture to installation, operations and maintenance (Energi Coast, 2024). This expertise ranges from foundations, cables, installation and ports and logistics to training and specialist subsea services. The sector is supported by several established and respected industry bodies including

Energi Coast, NOF and the Global Underwater Hub.

Research and development

The North East is home to globally recognised universities that bring research and emerging technologies in energy systems, robotics, digital technologies, materials science, integrated and flexible grid infrastructure, and environmental monitoring. This includes the Durham Energy Institute at Durham University which focuses on next-generation turbine design, structural engineering and aerodynamic performance. Newcastle University has capabilities in autonomous marine vehicles, marine sensing and turbine and platform hydrodynamics. Northumbria University possesses R&D expertise in materials science, energy storage and predictive modelling. The University of Sunderland possesses expertise in condition monitoring and reliability-centred maintenance.

Innovation

Together with the region's universities, the region is home to the Offshore Renewable Energy (ORE) Catapult. Headquartered in Glasgow with sites across the UK, the ORE Catapult provides industry with the ability to accelerate the development, testing, commercialisation and deployment of offshore renewables. The ORE Catapult in Blyth, Northumberland operates unique innovation assets including a 150m blade test facility, high-voltage cable testing and robotic and autonomous systems testing infrastructure for offshore wind developers, manufacturers and service providers. The ORE Catapult is also a key partner with the Port of Tyne in the

Maritime 2050 Innovation Hub, a partnership with the Department for Transport, Drax and others to develop technology and solutions with the maritime sector.

Development sites

The offshore wind and net zero sector is anchored around strategic development sites in the North East. This includes Energy Central in Blyth and the River Tyne Economic Corridor that sits within the North East Investment Zone. These sites agglomerate industry and spillover benefits through a cocktail of financial benefits, including tax incentives and capital co-investment funds (NECA, 2024).

Multi-scalar policy support

The North East Mayoral Strategic Authority has set out a mission to make the region the natural choice for offshore wind and clean energy investment, unlocking jobs, innovation and supply chain development. At a national scale, the UK Government's Industrial Strategy (DBT, 2025), North Sea Future Plan (DESNZ, 2025) and the UK Offshore Wind Industrial Growth Plan (Crown Estate, 2024) identifies offshore wind as a central pillar of clean energy growth. The focus is on building a competitive supply chain, scaling domestic turbine manufacturing, supporting innovation, creating skilled jobs and using public funding to leverage private sector investment, for example, £300m by Great British Energy in manufacturing capability, or £400m from the Crown Estate in new infrastructure. Successive national and subnational policymakers have repeatedly focussed science, innovation and industrial policies in

support of the offshore wind industry providing a stable policy environment for the sector.

Skilled workforce

The North East's colleges, businesses and universities collaborate to deliver skills, training and expertise to the sector. The region is home to a variety of education and industrial sector and place-based partnerships including Newcastle College's Energy Academy, the Energy Central Campus at the Port of Blyth, the Northumberland Welding and Fabrication Technical Training Centre, the Institute for Electrification and Sustainable Advanced Manufacturing at Newcastle University, Maersk Training, South Shields Marine School and the National Battery Skills Training Academy at New College Durham.

Headwinds Facing the North East Offshore Wind Sector

The North East has several structural and systemic barriers hindering the potential development and growth of the offshore wind industry, including:

Lack of coordination

The offshore wind sector in the North East lacks a unified Original Equipment Manufacturer (OEM) type entity, comparable to Airbus in aerospace, to integrate different stages of production and innovation.

Research and innovation not fully exploited

The North East's universities possess world-class expertise in offshore engineering, digital technologies, and energy systems. However, much of this research and innovation capacity remains underutilised by the offshore

wind sector.

Grid and transmission limitations

Insufficient grid infrastructure and slow transmission upgrades present a bottleneck to connecting new capacity. Without significant investment, projects risk delays and higher costs, limiting the region's ability to contribute effectively to national net zero capacity targets.

Supply chain potential remains untapped

Although the region hosts major companies such as Equinor and has internationally recognised ports and logistics infrastructure, there is no comprehensive integration of local suppliers. Many components are still imported or produced elsewhere. Universities and innovation hubs generate world-class research, but commercial uptake of this innovation remains limited.

Skills shortages constraining growth

Achieving the UK's net zero target by 2050 will require a significant expansion of green skills. While the North East has a rich industrial heritage and several education institutions offering provision to meet the needs of industry, there remains a shortage of specialised offshore wind skills to meet demand. This includes recruitment challenges in fields such as fabrication, offshore technicians and electrical engineering. Skills shortages exist in specialist technical skills such as subsea cabling, fibre optics, geotechnical engineering, project management and digital operations (North East LEP 2022).

National policy barriers

Despite the clear priority by the

incumbent Labour Government to accelerate the growth of the offshore wind sector for national economic benefit and energy security, national policy barriers remain. Development for offshore wind can take 10 years before construction commences and this is often due to potential impact of projects on marine habitats. There remains a need for industry and government to collaborate on updated sectoral marine planning. Funding also remains a significant barrier to growth with existing finance difficult to access at different phases (Crown Estate, 2024). This includes the UK Government's offshore wind budget for Contracts for Difference scheme in which both the total funding and access late in the development process often hinders the ability of industry to de-risk and scale at pace.

Winds of Change, Waves of Opportunity

Supply chain integration

The North East has a strong foundation of ports, engineering expertise, research institutions, and offshore wind developers, yet its potential is held back by fragmented coordination. Unlike sectors such as aerospace, where an OEM acts as a central systems integrator, offshore wind in the region lacks a single body to align priorities, coordinate supply chains and connect innovation with commercial deployment. A practical solution is to establish a regional systems integrator role to bring together developers, local authorities, universities, supply chain firms, and investors. Energi Coast could expand its mandate, with an already the recognised regional offshore wind cluster or a new public-private

leadership body supported by the Mayoral Strategic Authority. Priorities could include: setting common technology roadmaps, coordinating workforce and skills planning, and providing a single point of contact for investors and national government.

Solidify industry cluster representation

A unified regional voice could enable the North East to engage more effectively with national policy initiatives, including the UK Offshore wind Net Zero Investment Roadmap and the Offshore Transmission Review. Through stronger coordination, the region has the opportunity to position itself as the UK's preferred hub for floating offshore wind, integrated energy hubs, and next-generation offshore innovation.

R&D and innovation investment

By bringing together actors within the region's offshore wind sector, the region could increase and leverage funding for next-generation technologies such as floating offshore wind, advanced foundations, and digital monitoring systems. Mechanisms between the region's universities, innovation facilities at ORE Catapult and Port of Tyne, and the private sector could be strengthened to connect academic innovation and commercialisation with industry demand to accelerate technology adoption.

Skills and workforce

Through the Mayoral Strategic Authority's New Deal for North East Workers programme and a particular focus on sector growth of the region's clean energy industry, the region can develop short-term (e.g. skills

bootcamps), specialist and long-term training and education programmes (e.g. T-Levels, apprenticeships) to meet demand for the current need for engineers, specialist technicians, digital and marine operations staff. This could include promoting and providing mechanisms for cross-sectoral skills transfer from oil and gas and advanced manufacturing into the offshore wind sector.

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