

EPSRC Centres for Doctoral Training in Offshore Wind Energy

Innovating at Scale: Industrialising Offshore Wind with Environmental Responsibility

Annual Conference Programme – 24-26 March 2026

The Teaching and Learning Centre, Durham University





Welcome from our hosts



We are delighted to welcome you to the 2026 EPSRC Centres for Doctoral Training (CDTs) in Offshore Wind Energy Conference. It is especially exciting to bring together the CDT consortia, involving the universities of Durham, Hull, Loughborough, Newcastle and Sheffield, and over 40 industry project partners. This year we are also delighted to bring the CDT Conference to Durham University and to also welcome colleagues from the Renewable Energy Northeast Universities (ReNu) CDT.

During the conference you will hear about the exciting plans, research and impact being delivered by our Centres for Doctoral Training in Offshore Wind Energy. Across these two CDTs, our partnership will train over 130 future leaders for the offshore wind sector and address the evolving challenges as the sector seeks to meet government targets for the deployment of offshore wind.

The last year has seen exciting developments for both the CDT and the wider sector. Early CDT cohorts are now being awarded their PhD qualifications, impacting on the sector and going on to exciting careers in industry and academia. The recent Offshore Wind Industrial Growth Plan and Clean Power 2030 Action Plan highlight the continued importance of offshore wind in the UK energy mix and the vital role that the CDT has in delivering national targets.

Over the next three days, we hope you will benefit from an exciting exchange of ideas between experts in offshore wind energy from academia, industry and government. Our future leaders will showcase a fantastic programme of ongoing research, innovation and impact for offshore wind energy, set in the context of sector challenges and opportunities from leading figures in the industry.

We warmly welcome you to our 2026 CDT conference and hope that you enjoy the presentations of cutting-edge research, the wider perspectives of our partners and the opportunity to network with current and future leaders in the sector.

Professor Robert M Dorrell and Professor James M Gilbert

Co-Directors, EPSRC Centres for Doctoral Training in Offshore Wind Energy



Guest speakers and panel members

MAISY BRADBURY



Specialist Hydraulic Engineer at DHI

Maisy is a Specialist Hydraulic Engineer at DHI, where she focuses on the complex fluid dynamics that govern offshore wind environments. Her work bridges academic research and real-world engineering challenges, applying advanced experimental modelling to support the development of robust

offshore wind infrastructure and solve solutions for scour assessments, conceptual scour protection designs, water-replenishment systems for monopile foundations, and a wide range of hydraulic issues affecting offshore and coastal structures. Through her expertise, Maisy helps ensure the structural integrity and long-term reliability of offshore wind developments.

During her PhD, Maisy investigated innovative scour mitigation strategies using advanced experimental techniques. Her research centred on developing and evaluating novel methods with strong potential for integration into industry practice. This work strengthened the understanding of scour processes and provided practical insights into mitigation approaches that can enhance the resilience of offshore foundations.

KIRSTEN CARTER



Head of UK Marine Policy RSPB

Kirsten Carter, is an experienced UK marine policy specialist, dedicated to delivering healthy, resilient seas and thriving seabird populations. As Head of UK Marine Policy at the RSPB, she spearheads policy engagement, collaborating with Governments, industry, and scientists to ensure the

rapid expansion of offshore wind aligns with robust environmental safeguards for seabirds and marine ecosystems. Her work encompasses protected areas, fisheries, and offshore wind development, with an emphasis on effective delivery of marine spatial planning and strategic compensation.

In 2024 Kirsten played a leading role in securing the closure of industrial sandeel fishing in UK waters working in collaboration with Governments across the UK and the Renewables sector. Kirstens work focusses heavily on collaboration as demonstrated through her role as chair of Wildlife and Countryside Link's marine group, which focusses on uniting organisations to shape national marine policy and through leading Birdlife Europe and Central Asias approach to nature-positive offshore wind development, supporting international policy guidance on seabird sensitivity and strategic planning. Her work translates UK expertise into global best practices, empowering countries to accelerate offshore renewable deployment while protecting marine biodiversity.

Guest speakers and panel members

JANE COOPER



Deputy CEO at RenewableUK

In her role, Jane champions RenewableUK's more than 500 members to drive awareness of policy challenges, galvanise support and delivery of renewables, and publicly highlight the sector's benefits.

As a leader in the renewable energy industry, Jane works closely with the Offshore Wind

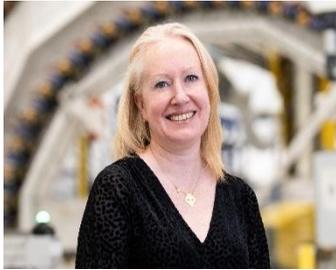
Industry Council (OWIC) to align the Government's ambitions for the Offshore Wind Acceleration Programme with tangible actions. Her work is central to ensuring the UK's world-leading offshore wind industry continues to expand and achieve its growth targets. A Chartered Mechanical engineer, Jane previously served as the Director of Regulatory and External Affairs at Ørsted, where she played a pivotal role in shaping industry regulations and fostering strategic partnerships between the Government and the private sector.

Over the last decade, Jane has built a deep, sector-wide expertise, contributing significantly to landmark collaborative initiatives such as the Offshore Wind Sector Deal and the Offshore Wind Growth Partnership. Jane is Chair of the Aura CDT Strategic Advisory Board and the Stakeholder Communications Board.

Guest speakers and panel members

JO DALLY

Chief Business Officer at NCC



Jo is the Chief Business Officer at NCC. In this role, she leads NCC strategy development and implementation alongside the business's public affairs and marketing functions and its portfolio of strategic industrial and place-based partnerships. Jo is also a Business Advisor

to the Metro Mayor for the West of England and co-Chair of the region's Business Board.

Before joining NCC, Jo held senior leadership roles across the public and private sector, all with innovation and partnership working at their core. This included as Director of the Western Gateway (a pan-regional economic partnership), in bp's Future Mobility and Solutions business, at the Royal Society (the UK's National Science Academy), and as a Senior Civil Servant with responsibility for Horizon Scanning and Emerging Technologies.

CHRIS GROVES

Professor in Engineering Durham University



Chris Groves is a Professor in Engineering at Durham University, having previously completed degrees in Electronic Engineering at Sheffield University, and postdoc positions in Physics at Cambridge University and Chemistry at the University of Washington, Seattle.

His research focusses on the interface between energy devices and energy systems as a way of using systems-level insights to drive energy device design and development.

Guest speakers and panel members

CLARK MACFARLANE



Formerly Chairman of Siemens Gamesa

Clark MacFarlane has recently retired from a 43-year career within Siemens. He was latterly UK Chairman of Siemens Gamesa, having held positions of CEO Europe/Middle East and UK Managing Director from 2012-2023.

Clark has represented the Wind Industry as a board member of Renewable UK, Vice-Chair of the Offshore Wind Industry Council (OWIC) and board member of the G+ Safety organisation for a combined total of 26 years. He continues to be involved as a NED and advisor, for example for the Offshore Wind Programme Board (OWGP).

OLIVER MORGAN-CLAGUE



Engineering Data Analyst Onyx Insight

I am an engineer specialising in blade structural health and manufacturing with over 5 years of experience in the wind industry. I completed my PhD at the Aura CDT in 2024, where I then moved to 11-i which was acquired by Onyx Insight where I work on developing real time blade structural health monitoring solutions.

Guest speakers and panel members

KAT ROUTE-STEPHENS



Head of Environment and Consents for RenewableUK

Kat Route-Stephens is an experienced marine industries and offshore renewables professional, specialising in consenting.

Kat is a Chartered Environmentalist and her career to date has included working as a marine licensing regulator; strategic Statutory Nature Conservation Body

advisor for marine industries and energy; marine consultancy; and as an offshore renewable developer policy analyst.

Kat now works at RenewableUK, delivering for the Offshore Wind Industry Council (OWIC) as Head of Environment and Consents. Kat leads work to develop strategic solutions to offshore wind consenting challenges to enable sustainable development with a wide range of stakeholders.

ELERI WILCE



Head of Offshore Development UK for RWE Renewables

Eleri has worked in the Offshore Wind Industry for 25 years, since the very early days of the industry. Eleri was Senior Consents Manager for the Rampion Project – one of the first offshore wind farms consented under the Planning Act - through Development, Construction and into Operation, before taking on the role

of Head of Consents where Eleri lead on strategic and policy aspects of Planning and Consenting for RWE.

In her current role as Head of Offshore Development UK, Eleri has an overview of the UK portfolio of Development projects, including the transition of the successful AR7 projects into construction, as well as the Supply Chain Delivery and Business Development teams.

Eleri chairs RUK's Planning and Environmental Strategy Group and was recently appointed as an Independent Director of the Energy Central Campus at the Port of Blyth.

Please note: All sessions will be taking place in the [Teaching and Learning Centre](#) (T&L) Durham University

Tuesday 24th March Agenda – Day 1

CDT RESEARCH ACADEMIC POSTER AND WINE RECEPTION – TOP FLOOR, T&L

17:00 – 18:00

Welcome from Dr Simon Beaumont, Associate Dean (PGR) Faculty of Science, Durham University

An opportunity to view conference posters from our CDT PhD researchers and discuss their cross-disciplinary research projects, providing research, development and innovative solutions for the offshore wind industry. There will be the opportunity to network with colleagues from the offshore wind industry and CDT academic researchers whilst light refreshments are served.

Wednesday 25th March Agenda – Day 2

REGISTRATION - GROUND FLOOR, T&L

08:30 – 9:00 Registration

WELCOME AND GUEST SPEAKERS – ROOM TLC042

9:00 – 9:15 Introduction from Professor Clive Roberts, Executive Dean (Science), Durham University and Professor Rob Dorrell, Co-Director EPSRC CDT in Offshore Wind Energy, Loughborough University
Session Chairs: Wayne Anderson and Zach Wang

9:15 – 9:45 Guest speaker – Jo Dally – Chief Business Officer at NCC
Innovating for Industry – anchoring sustainable wind manufacturing in the UK

9:45 – 10:15 Guest speaker – Kat Route Stephens – Head of Environment and Consents, RenewableUK
From Evidence to Action: Research Accelerating Offshore Wind Consenting & Environmental Recovery

CDT STUDENT RESEARCH PRESENTATIONS SESSION 1

10:20 – 11:20 Parallel Sessions (see session description for room details).

Session 1A
TLC106
SESSION CHAIR:
Wayne Anderson

THEME: PHYSICS AND ENGINEERING OF THE OFFSHORE ENVIRONMENT
Bayan Mohammad, **Innovative Decommissioning for Offshore Wind Monopiles**
Sarah-Jane Tonks, **Effect of Blade Surface Contamination on Wind Turbine Energy Production**
Geng Chen, **The hydrodynamics of three circular cylinders in oscillatory flow**

Session 1B
TLC113
SESSION CHAIR:
Zach Wang

THEME: ENVIRONMENTAL IMPACT, MARINE BIOLOGY AND AQUACULTURE
Benjamin Whitcombe, **The importance of fieldwork and international collaboration**
Teri Farthing, **Characterizing the Impact of Hydrodynamic Forces on Biofouling Growth**
Zoe Bainbridge, **Impact of vibration on Pagurus Bernhardus**

BREAK – TOP FLOOR, T&L	
11:20 – 11:40	Refreshment break
CDT STUDENT RESEARCH PRESENTATIONS SESSION 2	
11:40 – 13:00	Parallel sessions (see session description for room details).
<p>Session 2A TLC106 SESSION CHAIR: Bayan Mohammad</p>	<p>THEME: BIG DATA, SENSORS AND DIGITALISATION FOR THE OFFSHORE ENVIRONMENT</p> <p>Akash Kumar, Spatially Informed Graph Neural Networks with CVAE for Multi-Sensor-Based Anomaly Detection</p> <p>Charlotte Atkinson, Minimising the Levelised Cost of Electricity of Floating Wind Turbines by Controlling the Mooring Line Length</p> <p>Louis Donaldson, OPTimisation EXplainability (OPEX) for Maintenance Scheduling of Offshore Wind Farms</p> <p>Reuben Tinsdeall, Reinforcement learning for offshore wind farms</p>
<p>Session 2B TLC113 SESSION CHAIR: Pranavkumar Shivakumar</p>	<p>THEME: NEXT GENERATION MATERIALS AND MANUFACTURING</p> <p>Frances Longbottom, The Plastic Problem: Harnessing Light-Energy to Recycle Plastic Waste from the Offshore Wind Industry</p> <p>Isobel Wood, Optimising a Biochar Network from Wind Turbine Waste for Carbon Capture</p> <p>Jian Ye (Miguel), Superconducting Vernier Machines for floating wind turbines</p> <p>Stella Ezeoye-Ikegwuonu, Evaluating the Performance and Sustainability of Natural Fibre-Based Composites in Wind Turbine Components: A Comparative Study</p>

LUNCH - TOP FLOOR, T&L	
13:00– 13:45	Lunch
GUEST SPEAKERS AND PANEL – ROOM TLC042	
13:45 – 13:50	Introduction by Professor Robert Dorrell, Co-Director EPSRC CDT in Offshore Wind Energy, University of Hull <i>Session Chairs: Pranavkumar Shivakumar and Bayan Mohammad</i>
13:50 – 14:20	Eleri Wise – Head of Development UK, RWE AR7 Success…what does it actually mean?
14:20 – 14:50	Kirsten Carter – Head of UK Marine Policy, RSBP Powering healthy seas – delivering climate and nature needs in tandem
14:50 – 15:50	Session chaired by Jane Cooper, Deputy CEO, RenewableUK Panel discussion (14:50-15:30): <i>How can we do things better? How do we need to work? What does the next generation need to do?</i> Kirsten Carter – Head of UK Marine Policy, RSBP Eleri Wise – Head of Development UK, RWE Kat Route Stephens – Head of Environment and Consents, RenewableUK In conversation (15:30-15:50) Jo Dally – Chief Business Officer at NCC
BREAK - TOP FLOOR, T&L	
15:50– 16:05	Refreshment break

CDT STUDENT RESEARCH PRESENTATIONS SESSION 3	
16:05– 17:05	Parallel sessions (see session description for room details)
Session 3A TLC106 SESSION CHAIR: Pranavkumar Shivakumar	THEME: PHYSICS AND ENGINEERING OF THE OFFSHORE Michael Anya, Dynamic Cable Motion Characterisation: Is Biofouling a Challenge? Osama Akabat, Computer Modelling of irregular nonlinear surface waves and their effects on offshore wind turbine structures Soheil Navvabi, High-Performance Modelling of Composite Laminates
Session 3B TLC113 SESSION CHAIR: Geng Chen	THEME: OFFSHORE WIND ENERGY INTEGRATION: CHALLENGES AND IMPACTS Aliyu Ibrahim Nagidi, Leveraging Offshore Wind for Scalable DACCS in the Humber Industrial Cluster Nicholas Wilson, Wind to Hydrogen and it's Compression: How best to model bubbles on the surface Wayne Anderson, Forecasting Electricity Demand for a Net Zero Grid
WELCOME DRINKS AND CONFERENCE DINNER (by invitation) - <u>HATFIELD COLLEGE</u>	
19:00 – 19:30	Welcome drinks
19:30 – Onwards	Conference dinner

Thursday 26th March Agenda – Day 3

REGISTRATION - GROUND FLOOR, T&L

08:30 – 09:00 Registration

WELCOME AND GUEST SPEAKERS – ROOM TLC042

9:00 – 9:05 Introduction from Professor James Gilbert Co-Director EPSRC CDT in Offshore Wind Energy, University of Hull
Session Chairs: Geng Chen and Wayne Anderson

9:05 – 9:35 Clark MacFarlane, Formerly Chairman of Siemens Gamesa
“What 12 years on OWIC taught me about today’s focus areas, especially the Supply Chain”

9:35 – 10:05 Chris Groves, Professor in Engineering, Durham University
“A System-Level Assessment of Geological Hydrogen Storage, Renewable Generation and Demand Prediction applied to Net-Zero Pathways in Great Britain”

CDT STUDENT RESEARCH PRESENTATIONS - SESSION 4

10:10 – 11:30 Parallel sessions (see session description for room details)

Session 4A
TLC106
SESSION CHAIR:
Bayan Mohammad

THEMES: PHYSICS AND ENGINEERING OF THE OFFSHORE ENVIRONMENT; ENVIRONMENTAL IMPACT, MARINE BIOLOGY AND AQUACULTURE
Di Huang, **Quantifying Wake-Driven Mixing from Floating Offshore Wind Structures in Stratified Shelf Seas**
Pranavkumar Shivakumar, **The role of fabric anisotropy on cyclic loading of offshore soils: a grain-scale investigation**
Gemma Hoyes, **The inclusion of sediment and biological plume data in Satellite Derived Bathymetry**

<p>Session 4B TLC113 SESSION CHAIR: Geng Chen</p>	<p>THEMES: OFFSHORE WIND ENERGY INTEGRATION CHALLENGES AND IMPACTS; ReNU CDT Jake Forsyth-Hughes (ReNU CDT), Engineered MoS2 anchored to carbon cloth for enhanced hydrogen evolution Faisal Maim (ReNU CDT), The effect of the sulphurisation reaction rate on Bi₂S₃ films prepared by thermal vapour sulphurisation of sputtered bismuth precursors Zach Wang, The influences of renewable resource density and energy security concern on green tariff adoption Luke Neal, Those turbines aren't going to spin themselves: the work of nature and the Just Transition in OWE</p>
REFRESHMENT BREAK - TOP FLOOR, T&L	
<p>11:30 – 11:50</p>	<p>Refreshment break</p>
CDT STUDENT RESEARCH PRESENTATIONS - SESSION 5	
<p>11:50 – 12:40 Session 5A TLC106 SESSION CHAIR: Wayne Anderson</p> <p>Session 5B TLC113 SESSION CHAIR: Zach Wang</p>	<p>THEMES: ENVIRONMENTAL IMPACT, MARINE BIOLOGY AND AQUACULTURE; NEXT GENERATION MATERIALS AND MANUFACTURING; BIG DATA, SENSORS AND DIGITALISATION FOR THE OFFSHORE ENVIRONMENT; PHYSICS AND ENGINEERING OF THE OFFSHORE ENVIRONMENT Alanna Kirwan Lambe, Shifting Patterns: Defining Marine Net Gain in Offshore Wind Cailean Phillips, Miniaturising gross proximate composition analysis; Techniques, Methodologies and Results Cameron Bell, Turning plastic waste into anti-corrosion coatings Joshua Prowse, A brief overview of AI: the different types, and how they are trained Mohammad Roshani, Understanding Wind Flow Interactions in Floating Offshore Wind Farms</p> <p>THEMES: OFFSHORE WIND ENERGY INTEGRATION CHALLENGES AND IMPACTS; OPERATIONS, MAINTENANCE AND HUMAN FACTORS Georgia Traill-Scott, Against the Elements: Human Performance in Offshore Wind Jane Sandell, Change for the greater good Jessmond Elvina, Estimating Impact of offshore wind generation to electricity tariffs Raha Hamzehloian, Macroeconomic Impacts of Offshore Wind Energy: A Policy Perspective</p>

LUNCH - TOP FLOOR, T&L	
12:40 – 13:30	Lunch
GUEST SPEAKERS – ROOM TLC042	
13:30 – 13:35	Introduction from Professor James Gilbert, Co-Director EPSRC CDT in Offshore Wind Energy, University of Hull <i>Session Chairs: Geng Chen and Zach Wang</i>
13:35– 14:05	Oliver Morgan-Clague, at Onyx Insight: “Watching the wind: real-time structural health monitoring of turbine blades”
14:05 – 14:35	Maisie Bradbury, at DHI: “Foundations for the Future: Advancing Hydraulic Engineering in Offshore Wind Farms”
14:35-15:00	Prizes and Conference Close Professor James Gilbert, Co-Director, EPSRC Centres for Doctoral Training in Offshore Wind Energy. The RenewableUK prizes for best poster and best presentation will be awarded by Jane Cooper, Deputy CEO, RenewableUK
END OF CONFERENCE	

ESPRC CDT IN OFFSHORE WIND ENERGY RESEARCHER	POSTER TITLE
Theme 1: Physics and Engineering of the offshore environment	
Bayan Mohammad	Innovative Decommissioning for Offshore Wind Monopiles
Sarah-Jane Tonks	Effect of Blade Surface Contamination on Wind Turbine Energy Production
Geng Chen	From Canonical Cylinder Flow to Floating Wind Turbine Platform Hydrodynamics
Michael Anya	Dynamic Cable Motion Characterisation: Is Biofouling a Challenge?
Osama Akabat	Computer Modelling of Irregular Nonlinear Surface Waves and their effects on Offshore Wind Turbine structure
Soheil Navvabi	Greening the Wind: Powering Tomorrow with Bio-based Wind Turbines!
Di Huang	Quantifying Wake-Driven Mixing from Floating Offshore Wind Structures in Stratified Shelf Seas
Pranavkumar Shivakuma	The role of fabric anisotropy on cyclic loading of offshore soils: a grain-scale investigation
Mohammad Roshani	Can we model floating wind farms accurately and fast?
Theme 2: Environmental Impact, Marine Biology and Aquaculture	
Benjamin Whitcombe	From Hornsea to Space: Offshore Wind and the Changing Dynamics of Frontal System Productivity
Teri Farthing	Spatial and Temporal Impact of Hydrodynamic Forces on Biofouling: A Point Sampling Approach
Zoe Bainbridge	Dining Under Disturbance: Effects of Vibration on Hermit Crab (<i>Pagurus bernhardus</i>) Feeding Behaviour
Gemma Hoyes	Sediment: Can satellites see them? Is sediment an issue?
Alanna Kirwan Lambe	Shifting Patterns: Defining Marine Net Gain in Offshore Wind
Cailean Phillips	Making more detailed and accurate ecological models with sustainable approaches
Krysia Oates	Fish in a Sea of Turbines. Understanding the impacts and benefits of Offshore Wind on Fish in the Greater North Sea

Theme 3: Next Generation Materials and Manufacturing	
Frances Longbottom	From Offshore Wind Plastic Waste to Organic Acids via Low Energy Photocatalysis
Isobel Wood	Giving wind turbine blades a second life as carbon-locking biochar
Jian Ye (Miguel)	Superconducting Vernier Machines for floating wind turbines
Stella Ezeoye-Ikegwuonu	Greening the Wind: Powering Tomorrow with Bio-based Wind Turbines!
Cameron Bell	Repurposing plastic waste for anti-corrosion coatings
Theme 4: Operations, maintenance and human factors	
Georgia Traill-Scott	Against The Elements: Human Performance in Offshore Wind
Theme 5: Offshore Wind Energy Integration: Challenges and Impacts	
Aliyu Ibrahim Nagidi	Integrating offshore wind with direct air carbon capture & storage for the decarbonisation of the Humber industrial cluster
Nicholas Wilson	Size Distribution's Impact on Reactivity Influences Hydrogen Compression: The Kinetic Burden of Compartmentalised Chemical Ensembles at Solid Surfaces
Wayne Anderson	Forecasting Electricity Demand for a Net Zero Grid
Zach Wang	Consumer Perceptions and Willingness to Pay for Renewable/Offshore Wind-Based Energy Tariffs in the UK
Jane Sandell	Economic interactions of offshore windfarms and coastal communities
Jessmond Elvina	What happens when the wind storms through?
Raha Hamzehloian	Where Winds Make Jobs: Offshore Wind & Labour Market
Theme 6: Big Data, Sensors and Digitalisation for the Offshore Environment	
Akash Kumar	No Connection, Low Detection !!
Charlotte Atkinson	Machine Learning in The Design of a Control System for A Floating Wind Turbine
Louis Donaldson	OPTimisation EXplainability (OPEX) for Maintenance Scheduling of Offshore Wind Farms

Reuben Tinsdeall	Reinforcement learning for offshore wind farms
Joshua Prowse	Optimisation of wind farms power production using AI
ESPRC CDT IN RENEWABLE ENERGY NORTHEAST UNIVERSITIES (RENU)	POSTER TITLE
Kyle Affleck	From PERC to TOPCon: Modelling UK PV Capacity Replacements for Power Generation
Peter Brown	Ocean wave-structure interaction: Pressure on an inclined plate
Marjorie Chamberlain	Investigate integration and scalability of sand thermal storage with renewable energy systems
Eleanor Gibson	Novel Surface Functionalisation of Waste Timber Ash for Waste Valorisation & Dematerialisation
Frank Wigglesworth	Height-Dependent Turbulence Corrections for Next Generation Offshore Wind Turbines
Zahra Liravi	Mining Waste Repurposing for Photocatalytic Hydrogen Production and Wastewater Treatment
Morgan Rowlands	Finding novel materials for photoferroic solar cell devices
Sophie Bull	Going with the Flow: the use of Flow Chemistry in Alcohol Dehydration



EPSRC Centres for Doctoral Training in Offshore Wind Energy

Annual Conference

**Innovating at Scale:
Industrialising Offshore Wind with Environmental Responsibility**

Tuesday 24 – Thursday 26 March 2026

