



**14 March 2025**

[Tethys](#) is a knowledge hub with information and resources on the environmental effects of wind and marine energy. The bi-weekly [Tethys Blast](#) highlights announcements and upcoming events; new documents in the [Knowledge Base](#); and international energy news. [ORJIP Ocean Energy](#) has partnered with [OES-Environmental](#) to provide additional content. [Email us](#) to contribute!

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## **Announcements**

[New Tethys Story](#)

[\*\*Release of the 2024 State of the Science Report on Environmental Effects of Marine Renewable Energy Development Around the World and Next Steps for OES-Environmental\*\*](#) by OES-Environmental

The 2024 State of the Science Report brings together the most up-to-date information on the potential environmental effects of marine renewable energy development, shares helpful resources, and identifies a path forward to advance the marine renewable energy industry in a responsible manner. This report is a culmination of OES-Environmental Phase 4, a four-year effort spanning 2020-2024. [Read more in the latest Tethys Story here.](#)

[New WREN Short Science Summary](#)

[WREN](#) (Wind Energy-Environmental Research & Engagement Network) has published a new Short Science Summary, [Impact of Wind Energy on Flying Wildlife in Leading Wind Energy Producing Countries of Latin America: Challenges and Priorities](#), on Tethys.

[Call for Abstracts](#)

The University Marine Energy Research Community (UMERC) has extended the deadline for the [Call for Abstracts](#) for the [UMERC 2025 Conference](#) until 21 March 2025. The conference will take place on 12-14 August 2025 at Oregon State University in Corvallis, Oregon.

## BOEM Seeking Public Comment

The U.S. Bureau of Ocean Energy Management (BOEM) has released a Draft Finding of no historic properties affected for passive acoustic monitoring (PAM) activities on the Atlantic Outer Continental Shelf. [Public comments on the draft findings](#) are due 26 April 2025.

## Funding & Testing Opportunities

The Regional Wildlife Science Collaborative for Offshore Wind (RWSC) recently issued a [Request for Proposals](#) that will allocate \$1.2 million for passive acoustic monitoring (PAM) for marine mammals along the U.S. East Coast, in support of the Partnership for an Offshore Wind Energy Regional Observation Network (POWERON). Proposals are due 31 March 2025.

RWSC also recently issued a [Request for Proposals](#) to identify and fund data collection and research that increases understanding of the potential regional scale effects of offshore wind energy development on wildlife and marine ecosystems. Concept papers are due 1 April 2025.

The Offshore Wind Research & Innovation Programme, run by the European Marine Energy Centre (EMEC) and sponsored by the West of Orkney Windfarm, has launched its [Innovation Call 2](#), which is looking for weather forecasting solutions and service operation vessel designs for turbine access. Proposals are due 9 April 2025.

The Testing Expertise and Access for Marine Energy Research (TEAMER) program, sponsored by the U.S. Department of Energy and directed by the Pacific Ocean Energy Trust (POET), is accepting [Request for Technical Support \(RFTS\) 16](#) applications through 6 June 2025 to support marine energy testing and development projects. Open Water Support applications can be submitted any time. TEAMER also offers [Results Dissemination Support](#) (e.g., travel support).

## Career Opportunities

Biomathematics & Statistics Scotland (BioSS) seeks to appoint two [Ecological Statisticians](#) to work on applied and methodological research related to the impacts of offshore renewable energy on seabirds and marine mammals. Applications are due 27 March 2025.

CSA Ocean Sciences is seeking a [Leadership Scientist - Offshore Energy](#) with leadership experience in offshore energy or closely related industries ready to engage in a fast-paced, applied science leadership role in the private sector.

EMEC is looking for a [Chemical Research & Development Specialist](#) to support development and delivery of its synthetic fuels strategy and services and research and assess chemical, energy systems and synthetic fuel focused R&D and technical work on EMEC projects.

Aquatera is [looking for experienced professionals](#) and those eager to gain valuable experience in various areas, including planning and consenting support, environmental impact assessment, post-consent environmental management, terrestrial and marine ecology and ornithology support, and socio economic impact assessment and analysis.

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## Upcoming Events

### Upcoming Webinars

The Oceanic Network is hosting a webinar, “[OSW Fisheries + Biodiversity Research: Scientific Evaluation of Ecological Scour Protection](#)”, on 20 March 2025 from 11:00am-12:00pm EDT (3:00-4:00pm UTC). Dr. Yaeli Rosenberg, Head of Biology at ECOConcrete, will present initial results from a 2-year biological survey conducted to better understand the ecological impact of scour protection. [Register here.](#)

The Supergen Offshore Renewable Energy (ORE) Hub is hosting a webinar, “[The use of Dynamic Bayesian Network Modelling for the Spatial and Temporal Understanding of Marine Ecosystem Dynamics](#)”, on 26 March 2025 from 1:00-1:40pm UTC. Bayesian ecosystem models will be discussed with a focus on how they can be used to predict cumulative effects and to link these outputs to changes in ecosystem services and natural capital to assess the environmental and socio-economic benefits and trade-offs. [Register here.](#)

Renewables Grid Initiative (RGI) and Offshore Coalition for Energy and Nature (OCEaN) are hosting a webinar, “[Lessons from France – Accelerating Offshore Wind and Nature Protection](#)”, on 27 March 2025 from 1:30-2:30pm UTC, as part of a joint webinar series focused on understanding various European Union country’s approaches to delivering offshore wind alongside nature protection, including regulatory frameworks and strategies. [Register here.](#)

France Energies Marines is hosting a webinar, “[Monitoring fish in a context of offshore wind farm development](#)”, on 4 April 2025 from 12:00-1:00pm UTC. This webinar will present key results of the FISHOWF project and demonstrate how acoustic telemetry can be used for long-term monitoring of the effects of wind farms on fish. [Register here.](#)

The Supergen ORE Hub is also hosting a webinar, “[Community Perspectives of Wave Energy and Open-Water Testing at PacWave, Oregon](#)”, on 29 April 2025 from 4:00-5:00pm UTC. This session will explore the factors that influence public responses to new developments and help us to understand what may slow or hinder the planning and consenting processes. [Register here.](#)

### Upcoming Conferences

The Supergen ORE Hub is hosting its [Early Career Researcher Forum](#) on 14 April 2025 and its [Annual Assembly](#) on 15 April 2025 at the University of Manchester in Manchester, England. Registration for both events is free.

### Upcoming INORE Symposia

The International Network on Offshore Renewable Energy (INORE) is hosting a [North American Symposium](#) in Boston, Massachusetts, U.S. on 9-13 June 2025 and a [European](#)

[Symposium](#) in Aalborg, Denmark on 15-20 September 2025. Graduate students, early-stage researchers, or young professionals can apply to attend the events for free by 4 April 2025.

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## **New Documents on Tethys**

*[Tethys](#) hosts thousands of documents on the environmental effects of marine and wind (land-based and offshore) energy, including journal articles, conference papers, and reports.*

## **Marine Energy**

### **[SafeWave Deliverable 3.2 Sound Propagation Modelling](#) – Gambin et al. 2025**

This deliverable contains the methodology and results from Task 3.2 of SafeWAVE project (Acoustic Modelling), which essentially is about the modelling of underwater sound propagation with the results obtained in Task 2.3 Acoustic Monitoring. For the project, 4 WEC systems in 4 different test sites were studied. The 4 locations were: Aguçadoura (Portugal), BiMEP (Spain), Mutriku (Spain) and SEM-REV (France). Considering the impact threshold of 120 dB at SL (NMFS, 2024), it seems that all the studied WECs systems could negatively impact the cetaceans in all the studied areas at SL. Most of them significantly reduce these values within the first 10 meters, resulting in a relatively short affected area when compared to the entire acoustic map.

### **[Autonomous sensor suite for evaluating fish-turbine interactions and environmental impacts in marine renewable energy and hydropower](#) – Salalila et al. 2025**

Marine renewable energy (MRE) harnesses ocean-based resources such as waves, tides, currents, and thermal or salinity gradients for sustainable power generation. It has the potential to complement existing renewable resources, support remote communities, and contribute to decarbonization efforts. However, understanding the hydrodynamic forces created by MRE devices and their impacts on marine life is critical for responsible deployment. To address these concerns, advanced sensor devices, including the Marine Sensor Fish (MSF), Sensor Fish Mini (SF Mini), and Flexible Sensor Fish (FSF), were developed to measure interactions between aquatic organisms and MRE systems. This paper details the design, manufacturing, calibration, and field deployment of these sensor suites, highlighting their ability to capture key physical stressors such as shear forces, pressure changes, and collision impacts.

### **[A Fuzzy Logic Technique for the Environmental Impact Assessment of Marine Renewable Energy Power Plants](#) – Flores and Mendoza 2025**

The application of fuzzy logic to environmental impact assessment (EIA) provides a robust method to address uncertainties and subjectivities inherent in evaluating complex environmental systems. This is particularly relevant in ocean renewable energy projects, where predicting environmental impacts is challenging due to the dynamic nature of marine environments. We conducted a comprehensive literature review to identify the

types of impacts currently being investigated, assessed, and monitored in existing marine energy conversion projects. Based on these foundations, we developed both traditional and fuzzy mythologies for EIA. The fuzzy logic methodology approach allows for the incorporation of uncertainties into the assessment process, converting qualitative assessments into quantifiable data and linguistic levels and enhancing decision-making accuracy.

## **Wind Energy**

### **[Bats and Wind Turbines: Adding Ecological Context to the Olfaction Hypothesis](#) – Clerc et al. 2025**

Several hypotheses attempt to explain why bats collide with wind turbines. One recent hypothesis is that collisions result from bats scent marking turbines and that scent-marked turbines produce odor plumes that attract bats. This olfaction hypothesis is intriguing, but currently lacks the ecological context required to assess its plausibility. To provide context, we review when we expect Northern Hoary Bats and Mexican Free-tailed Bats to scent mark under natural conditions, and determine if our findings align with observations of bats interacting with wind turbines. We then consider the plausibility of scent-marked turbines creating odor plumes that attract bats. We conclude that it is unlikely that bats scent mark turbines intentionally in mid-flight or are attracted to scent markings on turbines.

### **[Developing the Offshore Wind that Birds Need](#) – Seavy et al. 2025**

In this report, we examine the potential impacts of offshore wind on birds and how these impacts can be effectively addressed to protect birds and the ecosystems they need. We provide an overview of the permitting process and the pertinent state and federal laws. The report includes Audubon's policy priorities and recommendations that will help ensure that the needs of birds and people are considered. Throughout the report, we illustrate how Audubon's work has supported the responsible siting and operation of offshore wind, and we identify opportunities for individuals, Audubon chapters, and state and regional offices to contribute positively to the debate on offshore wind development. We hope this report equips the reader with the knowledge to support responsible offshore wind development.

### **[Seventh Oregon Climate Assessment: Floating Offshore Wind Energy Infrastructure](#) – Nielsen et al. 2025**

Offshore winds on the U.S. West Coast represent one of the most energetic and consistent renewable energy resources in the nation. Harnessing these winds is a possibly viable technological pathway to meet decarbonization goals. Floating offshore wind energy is in a period of rapid global research, development, and deployment. Proposed lease areas in Oregon are in far deeper ocean waters than previously attempted for offshore wind, which leads to uncertainty for many government, community, tribal, and industry parties. Any potential development of floating offshore wind energy is far more likely to succeed

with collaborative and capacity-generating engagement among diverse interested and affected parties.

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## News & Press Releases

### Marine Energy

#### [Proteus Marine Renewables Installs Japan's First 1.1 MW Tidal Turbine](#) – Proteus Marine Renewables

Proteus Marine Renewables has successfully deployed the AR1100 tidal turbine in Japan, becoming the first tidal energy company to operate megawatt-scale devices in two countries. Now safely installed in the Naru Strait, the turbine will generate 1.1 MW of clean energy, accelerating the decarbonisation of the Goto Islands' electricity supply and advancing Japan's renewable energy transition. Building on the success of the AR500 pilot project in 2021, where a 500 kW device operated in the Naru Strait maintaining a 97% turbine availability, Proteus signed an equipment supply and works contract with Kyuden Mirai Energy in November 2022 to upgrade the device to 1.1 MW capacity. Leveraging its modular architecture, Proteus enhanced its existing turbine's performance and efficiency by integrating advanced pitch and yaw systems, along with other improvements to achieve a 1.1 MW rating.

#### [Wave Energy Scotland Unveils Wave Energy Cluster Concept Design](#) – Wave Energy Scotland

Wave Energy Scotland (WES) has unveiled a concept design for a multi-megawatt cluster arrangement of wave energy converter devices with the aim of exploiting potential advantages over individually moored devices and stimulating novel developments to lower costs in the offshore renewable energy sector. Floating offshore wind projects, as seen in the ScotWind leasing round, are moving towards deeper water locations with significant wave climates, such as off the north and west coasts of Scotland. Economic modelling by Offshore Wind Consultants on behalf of WES suggests that sharing space, infrastructure, services and supply chain with offshore wind developments can significantly reduce the cost of wave energy. Research conducted by WES at the University of Edinburgh's FloWave facility revealed no significant loss of performance is expected for wave energy converters placed relatively close together.

#### [Next chapter for Anglesey tidal energy with launch of Cydnerth](#) – Morlais Energy

Work will soon begin on site in Holyhead to strengthen the grid connection for the Menter Môn Morlais tidal energy scheme. This is another important milestone for the project, which will see clean low carbon electricity generated off the coast of Anglesey. Owned and run by social enterprise, Menter Môn, the work on the Cydnerth project at Parc Cybi will future proof Morlais enabling it to progress towards its potential generating capacity of 240 MW. The expansion aims to create new jobs and supply chain

opportunities, cementing the region's position in the tidal energy sector. Morlais is the largest consented tidal energy scheme in Europe. The substation linked to the project was completed in 2023 and the first tidal energy devices are expected to be deployed at sea in 2026.

### [EU-Backed Project to Unlock Tidal and River Energy Potential](#) – Maritime Technology News

A new EU-funded project has brought together 14 partners across Europe to unlock the potential of harnessing tidal and river energy in the North-West Europe. The SHINES project, short for Showcasing Hydrokinetic energy Innovations for Northwest European Energy Sovereignty, is ready for launch, bringing together 14 partners from France, Ireland, Belgium, the Netherlands, Switzerland, and Germany. Co-financed by Interreg North-West Europe under the fourth call for projects, SHINES is set to unlock the potential of tidal and river energy systems, an opportunity still largely untapped in the region. With a total budget of \$10.9 million, including 60% ERDF funding of about €6.5 million, the project, led by OPEN-C Foundation, will span from January 2025 to December 2028. SHINES will work to address several investment, economic and regular hurdles by replicating and scaling up three innovative solutions - HydroWing, RivGen and TidalKite - through grid connections and real sea deployments in France and the Netherlands.

### [Global OTEC prepares for first deployment in Atlantic Ocean \(Video\)](#) – Offshore Energy

UK-based company Global OTEC is preparing to deploy its floating cylindrical hull into the Atlantic Ocean, with operations set to begin once weather conditions allow. The deployment will take place at the Oceanic Platform of the Canary Islands (PLOCAN) off Gran Canaria, Spain. The company recently completed the final preparatory steps, including anchor installation and clearance from the harbor master. According to Global OTEC, the project now awaits wave conditions to remain below one meter to facilitate towing the structure to the test site. Once in position, Global OTEC will assemble the cold water pipe and proprietary connection point, moving into the next phase, real-world testing. Global OTEC's prototype aims to overcome long-standing challenges in OTEC technology by ensuring resilience in extreme weather conditions.

## Wind Energy

### [Australia Advances Offshore Wind Energy Granting Two Feasibility Licenses](#) – The Maritime Executive

Australia continues its efforts to launch its first offshore wind energy projects. A year after declaring offshore zones and selecting the first potential projects, the government granted two more feasibility licenses to proceed with the planning for wind farms in the Southern Ocean and the other for the Pacific Ocean. Only in the past few years did Australia pass its first framework legislation to establish the process for developing offshore wind energy sites. The government selected areas and began accepting project

applications in the multi-step planning process. Projects back industry majors were the latest to be moved from provisional licenses to full feasibility licenses. One project, Novocastrian Wind is owned by Equinor and Oceanex Energy. The other is Spinifex being co-developed by Parkwind, which is part of JERA, and Alinta Energy.

### **Van Oord and Ecowende boost North Sea biodiversity with Tree Reefs and Oyster Hubs – Van Oord**

Van Oord and Ecowende have signed a contract for the design, construction and installation of Tree Reefs and Oyster Hubs at Ecowende's Hollandse Kust West wind farm (HKW, site VI). Implemented by Van Oord Ocean Health, these innovative methods aim to naturally enhance biodiversity in the North Sea. The contract marks a significant milestone, as it is the first time Tree Reefs will be implemented on such a large scale in the North Sea. Tree Reefs are circular, biodegradable reef structures made from discarded fruit trees, which are relatively sturdy and stable. The trees will be collected from the Dutch fruit cultivation sector and are usually cleared as soon as they start producing less fruit. The Tree Reef concept was developed by the Royal Netherlands Institute for Sea Research (NIOZ).

### **More renewable power from offshore wind – Gode Wind 3 starts commercial operation – Ørsted**

Final testing for the Gode Wind 3 Offshore Wind Farm, which is jointly owned by Ørsted and Nuveen Infrastructure, was completed on 28 February 2025, and the project is now fully commissioned. The project is Ørsted's fifth operational offshore wind farm in Germany, and with an installed capacity of 253 MW, it can supply the equivalent of 250,000 households with renewable power. In August 2023, construction of Gode Wind 3 started at sea, when the first foundation was installed. Gode Wind 3 consists of 23 wind turbines from Siemens Gamesa Renewable Energy, each with a capacity of 11 MW. With a rotor diameter of 200 metres, this wind turbine model is currently the largest running wind turbine in German waters.

### **RWE gives monopile foundation covers a new lease of life – RWE**

It looks like small UFOs have landed at Thyboron Port, Denmark. But these are foundation covers for RWE's 1.1 gigawatt (GW) Thor offshore wind farm. RWE has recently taken delivery of 36 of the total of 72 innovative reusable monopile hard covers, sourced from the Dutch company Circular Covers B.V. These covers will be used to protect the monopile foundations from the harsh conditions at sea until the turbine towers are installed next year. By deploying reused covers, RWE is once again demonstrating its commitment to sustainability and circularity. The covers serve as a temporary yet essential solution for shielding against seawater, rain, and bird droppings until the turbine towers are installed on the monopiles. Usually, the covers are disposed of after use because they were tailor-made to a specific offshore project.



## New measures to curb underwater noise and accelerate renewable energy – UK Government

The UK Government's sprint to build clean, homegrown power will be accelerated whilst also protecting vulnerable animals, as it recently revealed targeted changes in the management of underwater noise. As part of the Government's Plan for Change, the innovative measures will reduce harmful noise levels in our seas to allow new offshore wind projects to continue to be built at pace, particularly in sensitive areas of our waters. This will help fast-track the UK to deliver a clean power system by 2030. Developers will now be required to demonstrate they have made clear efforts to reduce underwater noise during the installation of offshore wind turbines. This will be followed by a public consultation on setting a future noise limit for offshore wind construction. The measures will also prevent construction delays caused by breaches in noise thresholds, accelerating the building of offshore wind projects planned for 2025 onwards.