



17 January 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!

[Announcements](#)
[Upcoming Events](#)

[Marine Energy Documents](#)
[Wind Energy Documents](#)

[Marine Energy News](#)
[Wind Energy News](#)

Announcements

[New SEER Gulf of Mexico Research Briefs](#)

The U.S. Offshore Wind Synthesis of Environmental Effects Research ([SEER](#)) effort, led by the National Renewable Energy Laboratory ([NREL](#)) and Pacific Northwest National Laboratory ([PNNL](#)) with support from the U.S. Department of Energy's (DOE) Wind Energy Technologies Office (WETO), has published a [new set of educational research briefs on the environmental effects of offshore wind energy development in the U.S. Gulf of Mexico](#) on Tethys.

[New Tethys Story](#)

[COME3T: Committee of experts for offshore renewable energies environmental and socio-economic issues](#) by Sybill Henry (France Énergies Marines)

Offshore renewable energy projects, including offshore wind, wave, and tidal energy, are expanding rapidly all over the world. Created in 2018, the COME3T (Committee of experts for offshore renewable energies environmental and socio-economic issues) initiative aims to provide answers to some of the main environmental and socio-economic effects inherent in the development of offshore renewables. [Read more in the latest Tethys Story here.](#)

New Offshore Wind Energy Guide on WINDEXchange

The U.S. DOE's WETO just released a new [Offshore Wind Energy Guide](#) on WINDEXchange that serves as a comprehensive resource for the public to build a foundation of knowledge about all aspects of offshore wind energy.

EnergyTech UP

The U.S. DOE's Office of Technology Transitions has opened registration for the [EnergyTech University Prize \(EnergyTech UP\)](#), where student teams will compete to identify a promising energy technology, assess its market potential, and create a business plan for commercialization. An informational webinar will take place on 23 January 2025 and student registration for the Explore Phase is due 3 February 2025.

BOEM Seeking Public Comment

The U.S. Bureau of Ocean Energy Management (BOEM) is [inviting public comment](#) on a regional environmental analysis of potential mitigation measures on future development activities for five offshore wind lease areas off California's coasts. BOEM will hold two virtual public meetings on 28 and 30 January 2025. Comments are due 12 February 2025.

BOEM recently announced it will initiate an environmental review of Vineyard Mid-Atlantic's proposed offshore wind energy project, located offshore New York and New Jersey, and has opened a [public comment period](#) through 1 March 2025.

BOEM also recently published a [Call for Information and Nominations](#) for possible wind energy leasing off the coast of the U.S. Pacific Territory of Guam. The Call will close on 7 April 2025.

Calls for Abstracts

The [Call for Abstracts & Paper Submissions](#) for the [16th European Wave and Tidal Energy Conference \(EWTEC 2025\)](#) has been extended until 20 January 2025. EWTEC will take place on 7-11 September 2025 in Madeira, Portugal.

The [Call for Abstracts](#) for the [Wind Energy Science Conference \(WESC 2025\)](#) has been extended through 31 January 2025. WESC will take place on 24-27 June 2025 in Nantes, France.

The [Call for Abstracts](#) for the [8th Conference on Wind Energy & Wildlife Impacts \(CWW 2025\)](#) is open until 31 January 2025. CWW will take place on 8-12 September 2025 in Montpellier, France.

The Oceanic Network has opened the [Call for Posters](#) for the [International Partnering Forum \(IPF 2025\)](#) through 10 February 2025. IPF will take place from 28 April to 1 May 2025 in Virginia Beach, Virginia, U.S.

The [Call for Abstracts](#) for the [7th International Conference on The Effects of Noise on Aquatic Life \(Aquatic Noise 2025\)](#) is now open through 28 February 2025. Aquatic Noise 2025 will take place from 29 June to 4 July 2025 in Prague, Czech Republic.

Funding & Testing Opportunities

Horizon Europe (HORIZON) has opened several Calls for Proposals including: 1) [Minimisation of environmental, and optimisation of socio-economic impacts in the deployment, operation and decommissioning of offshore wind farms](#), 2) [Demonstrations of innovative floating wind concepts](#), and 3) [Critical technologies for the future ocean energy farms](#). Proposals are due 4 February 2025.

The Testing Expertise and Access for Marine Energy Research (TEAMER) program, sponsored by the U.S. DOE and directed by the Pacific Ocean Energy Trust (POET), is accepting [Request for Technical Support \(RFTS\) 15](#) applications through 7 February 2025 to support marine energy testing and development projects. Open Water Support applications can be submitted any time. TEAMER is now offering [Results Dissemination Support](#) (i.e., travel and publication support).

The U.S. DOE's WETO recently announced the [Wind Turbine Technology Recycling Funding Opportunity](#), which will invest up to \$20 million to help develop technology solutions to improve the recyclability of wind energy technologies. Applications are due 11 February 2025.

The U.S. DOE's Office of Clean Energy Demonstrations (OCED) has opened applications for up to \$400 million, through [the Energy Improvements in Rural or Remote Areas \(ERA\) Program](#), to spur innovative, community-focused, clean energy solutions for rural and remote communities across the United States. Concept papers are due by 27 February 2025.

Career Opportunities

The European Marine Energy Centre (EMEC) is hiring an [Assistant Project Manager](#) to support its project portfolio of wave and tidal energy, offshore wind, hydrogen, and energy systems projects; and an [Operations and Technology Director](#) to lead its operational, technical, and project delivery activities. Applications are due 17 and 20 January 2025, respectively.

PNNL is seeking an [Operations Specialist 5](#) to provide leadership and safety oversight of its Energy and Environment Directorate's portfolio of research operations across the PNNL Sequim Campus, which focuses on renewable energy development, coastal resilience and planning, and research and technology development. Applications are due 22 January 2025.

Ifremer, a leading French institute in marine sciences, has announced its call for applications for [6 Postdoctoral Contracts](#). Potential projects could focus on marine renewable energy technologies (offshore and floating wind, tidal energy, wave energy) and resource assessment and design. Applications are due 27 January 2025.

Northumbria University is offering a [PhD opportunity to develop high-fidelity CFD models for offshore energy systems](#), such as wave energy converters and floating offshore wind turbines. Applications are due 3 February 2025.

East Carolina University (ECU) is recruiting a [PhD in Integrated Coastal Sciences](#) to study the social acceptance and engagement around introducing marine energy technology and participate in Atlantic Marine Energy Center (AMEC) activities. Priority applications to the ECU program are due by 15 February 2025.

Upcoming Events

Upcoming Webinars

The New York State Energy Research and Development Authority (NYSERDA) Offshore Wind team is hosting a Learning from the Experts webinar, “[Acoustic Mitigation Technologies for Offshore Wind](#)”, on 22 January 2025 from 1:00-2:00pm EST (6:00-7:00pm UTC).

France Énergies Marines is hosting a webinar, “[Suivre les effets des parcs éoliens en mer sur les poissons \(Tracking the effects of offshore wind farms on fish\)](#)”, on 23 January 2025 from 10:30am-12:00pm CET (9:30-11:00am UTC). The webinar will be hosted in French and will discuss the use of acoustic telemetry during the 2-year FISHOWF project.

The [SEER](#) project is hosting a webinar, “[Exploring the Potential Environmental Effects of Offshore Wind Energy in the U.S. Gulf of Mexico](#)” on 23 January 2025 from 9:00-11:00am PST (5:00-7:00pm UTC). Speakers will discuss offshore wind siting/permitting in the U.S. Gulf of Mexico, relevant technologies and infrastructure, potential environmental effects of offshore wind development in the region, monitoring and mitigation methodologies, and knowledge gaps and data needs. [Register here.](#)

The Nature Conservancy is hosting a webinar, “[Sharing the Social Value of Offshore Wind Through Community Benefits Agreements](#)”, on 23 January 2025 at 12:00pm EST (5:00pm UTC). Speakers will discuss their experience supporting community benefit agreements across Europe and Japan, and a new report which reviews examples of how the U.S. federal government and states are incentivizing and incorporating community benefits agreements into their offshore wind development processes.

Renewables Grid Initiative and OCEaN - North & Baltic Seas are kicking off a new webinar series to present highlights from their [recent report](#) and lessons learned from OCEaN’s exploration of the topic of mitigation. The webinar, “[Fostering Healthy Seas: Avoidance and Minimisation of Environmental Impacts from Offshore Wind and Grids](#)”, will take place on 23 January 2025 from 11:00am-12:15pm CET (10:00-11:15am UTC).

The Supergen Offshore Renewable Energy Hub is hosting a webinar, “[The use of Dynamic Bayesian Network Modelling for the Spatial and Temporal Understanding of Marine Ecosystem](#)”

[Dynamics](#)”, on 29 January 2025 from 1:00-2:00pm UTC. During the webinar, Dr. Neda Trivonova from the University of Aberdeen will discuss marine ecosystem dynamics.

Upcoming Marine Energy Career Panel

PNNL, NREL, and Sandia National Laboratories are hosting a virtual [Marine Energy Career Panel](#) on 5 March 2025 from 2:00-3:30pm PST. U.S. DOE National Laboratory staff working to advance the marine energy industry across various research disciplines will discuss their marine energy careers including their background, education, career path, and current projects. In addition, mentorship, networking, and interpersonal communication skills will be addressed to extend advice to students who are preparing to graduate and enter the workforce. [Register here.](#)

Upcoming Conferences

The National Hydropower Association is hosting [Waterpower Week 2025](#) from 31 March to 2 April 2025 in Washington, DC, U.S.

The [Supergen ORE Hub](#) is hosting the 8th Supergen ORE Hub Annual Assembly on 15 April 2025 in Manchester, England. Registration will open soon.

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

Seals exhibit localised avoidance of operational tidal turbines – Montabaranom et al. 2025

Tidally energetic habitats are used by a range of marine mammals, including pinnipeds. These areas are also important to the tidal energy industry, leading to an overlap between tidal developments and important habitats used by seals. The concerns around negative ecological impacts from tidal turbines derive primarily from the potential for fatal collisions between animals and the moving parts of the turbine (i.e. blades) and habitat exclusion from important areas. We quantified the number of encounters of seals within close range (10s of metres) of the turbine and estimated the likelihood of seal presence over an annual cycle. Data were collected with two multibeam sonars monitoring an operational turbine in the Pentland Firth, Scotland, between May 2022 and June 2023. There were 704 seal encounters within close range of the turbine.

Performance of a Drifting Acoustic Instrumentation SYstem (DAISY) for characterizing radiated noise from marine energy converters – Polagye et al. 2024

Marine energy converters can generate electricity from energetic ocean waves and water currents. Because sound is extensively used by marine animals, the radiated noise from

these systems is of regulatory interest. However, the energetic nature of these locations poses challenges for performing accurate passive acoustic measurements, particularly with stationary platforms. The Drifting Acoustic Instrumentation SYstem (DAISY) is a modular hydrophone recording system purpose-built for marine energy environments. Using a flow shield in currents and mass–spring–damper suspension system in waves, we demonstrate that DAISYs can effectively minimize the masking effect of flow noise at frequencies down to 10 Hz. In addition, we show that groups of DAISYs can utilize time-delay-of-arrival post-processing to attribute radiated noise to a specific source.

Marine spatial planning techniques with a case study on wave-powered offshore aquaculture farms – Ewig et al. 2025

As emerging marine technologies lead to the development of new infrastructure across the ocean, they enter an environment that existing ecosystems and industries already rely on. Although necessary to provide sustainable sources of energy and food, careful planning will be important to make informed decisions and avoid conflicts. This paper examines several techniques used for marine spatial planning, an approach for analyzing and planning the use of marine resources. Using open-source software including QGIS and Python, the potential for developing offshore aquaculture farms powered by a reference model wave energy converter from the Sandia National Labs, the RM3, along the Northeast coast of the United States is assessed and several feasible sites are identified.

Wind Energy

Evaluating Tools and Technologies for Monitoring Baleen Whales During Offshore Wind Foundation Installation – Szesciorka et al. 2025

Offshore wind energy facilities are being planned and installed in United States waters in accordance with regulations and processes designed to avoid negative effects on federally-protected baleen whales and other marine mammals. Potential impacts to baleen whales associated with offshore wind farm construction are of particular concern because of their conservation status, the overlap of their habitat with existing and planned offshore wind energy facilities, and their expected sensitivity to low-frequency sounds, such as those produced during pile driving. Therefore, this report focuses on monitoring technologies capable of detecting this species group. The ability to install offshore wind turbine foundations in low- to no-visibility conditions is of interest to developers because it increases construction flexibility and reduces the duration of in-water foundation installation activities.

Offshore wind farms could impact coastal marine heatwaves in eastern boundary upwelling systems – Dalsin et al. 2025

Analysis of ecosystem impacts from offshore wind (OSW) farm development has primarily focused on localized effects. However, in Eastern Boundary Current Upwelling Systems (EBUS) like the California Current, OSW farms can modify the intensity and

spatial structure of wind-driven upwelling, inducing non-local (tens of kms away) changes to seawater temperature. Recent numerical modeling research determined that a hypothetical upper bound full buildout of OSW farms in central California could warm coastal waters through a reduction in upwelling. Here, we examine the sensitivity of coastal marine heatwaves (MHWs), which are prolonged extreme seawater temperatures that are among the greatest threats to marine ecosystems, to seawater temperature increases motivated by OSW-induced warming.

[Development of a collision impact indicator to integrate in the life cycle assessment of offshore wind farms](#) – Baulaz et al. 2025

Life cycle assessment (LCA) is a robust approach to estimate the environmental impacts of an offshore wind farm (OWF). However, methodological hurdles remain, particularly the lack of appropriate indicators to assess ecosystem impacts during OWF construction and operation and the scarcity of marine ecological data. To address the lack of indicators, this article focuses on developing an impact indicator specifically related to bird collision with OWFs. To assess bird collisions during the operation of OWFs, we adapted a life cycle impact indicator originally developed for onshore wind farms. This indicator combines spatial data on bird species distribution and vulnerability to collisions with OWF technical characteristics (number of turbines, power production, rotor diameter). The results model and map seabird collisions at OWF worldwide and introduce a biodiversity impact characterization factor into LCA.

News & Press Releases

Marine Energy

[OTE Corp Signs \\$3.5M Deal for OTEC Installation at US Army Base](#) – OTE Corp

Ocean Thermal Energy Corporation (OTE Corp) has teamed up with Johnson Controls to explore the feasibility of deploying a 17.5 MW Ocean Thermal Energy Conversion (OTEC) system at the U.S. Army Garrison - Kwajalein Atoll (USAG-KA). The project is part of Johnson Controls' Deep Energy Retrofit Assessment program aimed at improving energy independence for the remote military base. DCO Energy will assist in the project by providing engineering services, including system design, load analysis, and cost estimation. OTE Corp's OTEC technology utilizes natural ocean temperature differences to generate clean energy and desalinate water, contributing to the Army's sustainability and energy security goals. The collaboration builds on previous projects by OTE Corp and DCO Energy, such as a seawater cooling system for a resort in the Bahamas.

[Eco Wave Power's Wave Energy System at Jaffa Port Demonstrates Reliability with 24/7 Power Production](#) – Eco Wave Power

Eco Wave Power recently announced that its EWP-EDF One wave energy project at Jaffa Port, Israel, successfully operated around the clock during the last week of December

2024, with an average wave height of 1.6 meters and peak production of 26KW. This milestone underscores the potential of wave energy as a reliable and sustainable source of renewable power. In addition, the project was subject to conditions classified as stormy and operated without damages, demonstrating the robustness and reliability of Eco Wave Power's innovative technology. Eco Wave Power's pioneering technology proved its ability to deliver continuous, round-the-clock energy, marking a significant achievement for the industry. This breakthrough is a testament to the capability of wave energy to provide a dependable energy source in suitable locations.

University of Hawaii Advances Wave Energy Research Through TEAMER – U.S. DOE

Marine energy is still a relatively young field and using just one-tenth of the available marine energy resources in the United States could power 22 million homes. Accessing funding, expertise, and locations for testing can be difficult for technology developers. In 2020, the U.S. DOE launched the TEAMER program to help overcome these barriers and advance the viability of marine energy. Sponsored by WPTO and directed by POET, TEAMER offers developers and researchers the opportunity to test and refine their marine energy technologies at a range of facilities in the TEAMER Network. TEAMER's support allowed the University of Hawai'i (UH) to advance two oscillating water column (OWC) technologies. An OWC is a type of wave energy converter that harnesses energy from waves. It uses the power of waves, funneled into an open chamber, to pressurize air. That pressurized air then spins a turbine and generates electricity.

Transatlantic partnership drives innovation in wave energy and desalination – Ocean Energy Europe

Exowave and AquaX Energy Americas recently announced the formation of AquaX JV LLC. This transatlantic joint venture combines cutting-edge wave energy technology with regional expertise to address growing global demand for sustainable, secure, and scalable renewable energy and potable water. The partnership aims to deploy Exowave energy solutions across North America, Central America, South America, and the Caribbean, with a vision of powering communities and preserving ecosystems. AquaX JV LLC brings together the best of Exowave's proven Wave Energy Converter (WEC) technology and AquaX Energy Americas' expertise in renewable energy deployment. The first demonstrator projects are set to launch on the U.S. coasts, including Monterey, CA, and Virginia Beach, VA. These initiatives will validate the technology's performance, efficiency, and cost-effectiveness, paving the way for a 20 MW project pipeline scheduled for completion by 2030.

U.S. Support and New Investments Buoy Hopes for Marine Energy – Yale Environment 360

Recently, the accelerating push for net zero emissions, along with slow but steady technological improvements and new investments, have sparked fresh optimism in the marine energy field. In September, the Biden Administration announced \$112.5 million in funding for prototypes from the DOE's WPTO — the largest-yet U.S. investment in

wave energy. In November, that office also issued cash prizes of \$10,000 to each of 20 startup companies. Key to these investments is a new testing site in Oregon, developed by the Department of Energy, Oregon State University, and local stakeholders, with four “parking stalls” for wave energy prototypes. PacWave South, with Hales as its scientific director, plans to host its first companies in the summer of 2026, joining a handful of other testing sites globally.

Wind Energy

[BOEM Finalizes Fisheries Mitigation Guidance](#) – U.S. BOEM

BOEM has finalized guidance aimed at mitigating the impacts of offshore wind energy projects on commercial and for-hire recreational fisheries. BOEM’s final guidance provides a national framework for addressing social and economic impacts on the fishing industry affected by offshore wind development. This comprehensive final guidance, informed by extensive public input, establishes clear processes for the offshore wind industry to address potential disruptions to fisheries. It ensures consistency and promotes fair treatment of fishermen, regardless of their home or landing port. BOEM initiated the guidance development process in late 2021 by issuing a Request for Information and opening up a 45-day public comment period. Using input provided during that comment period, BOEM then published draft guidance in June 2022 and opened another 60-day comment period.

[Offshore Wind Innovation Call Winners Announced](#) – EMEC

Three innovative companies have been awarded funding by the West of Orkney Windfarm through EMEC’s Offshore Wind R&I Programme. The £1 million R&I programme, delivered by EMEC and sponsored by the West of Orkney Windfarm, is designed to find innovative solutions that could deliver offshore wind faster, cheaper and at lower risk. The programme’s inaugural innovation call attracted 29 applications from supply chain companies. Proposals offered innovative solutions addressing two specific challenge areas identified and prioritised by the programme: understanding metocean conditions at and en route to the West of Orkney Windfarm site; and design for short weather window installations. Funding has been awarded to TRIOS Renewables and Seaview Sensing for the metocean challenge, whilst Next Ocean will address short weather windows.

[One step closer to full turbine blade circularity at our Greater Changhua 2b and 4 Offshore Wind Farm!](#) – Ørsted

Together with Siemens Gamesa, Ørsted’s installing new turbine blades made with recycled glass fibres from old blades for the first time in the industry. The breakthrough innovation stems from the three-year DecomBlades innovation project, where Ørsted together with nine other partners worked to establish sustainable, cost-efficient recycling value chains for wind turbine blades. The project demonstrated that glass fibres from old blades can be retrieved and used in the production of new, high-quality fibres that match

the requirements for new blades. This helps reduce the need for new materials and proves that there are feasible ways to sustainably repurpose materials from old wind turbine blades. Ørsted is excited to incorporate recycled glass fibres in the new blades at Greater Changhua 2b and 4 – taking them one step closer to full turbine blade circularity.

Coming Soon: NREL's Most Powerful Research Wind Turbine Yet – NREL

NREL's Flatirons Campus is home to the turbines, as well as numerous other research assets that allow staff to model and validate everything related to sustainable energy—from fatigue characterization of wind turbine blades to validation of wave energy converter performance to studies on the durability of photovoltaic trackers and panels. But every once in awhile, those assets need an upgrade. That is why NREL, on behalf of the U.S. DOE's WETO, has issued a purchase order for a new turbine that will enable research that more closely represents contemporary turbines and wind farms. The turbine will supplement the existing 1.5-megawatt turbine owned by DOE but with more capabilities. This state-of-the-art turbine will offer several key benefits.

Brazil president signs law authorizing offshore wind development – Reuters

Brazilian President Luiz Inacio Lula da Silva has signed into law a bill authorizing the development of offshore wind farms, a statement said late on Friday, a bid to strengthen the country's energy security and spark a wave of investment. The new law foresees incentives for the development of offshore energy projects in Brazilian territorial waters, the statement said. Offshore wind speeds tend to be faster and steadier than on land, a potential advantage compared with wind farms built in a continent. But offshore wind farms can be expensive, difficult to build and potentially affect marine animals and birds, according to the American Geosciences Institute. The Brazilian government said the law provides guidelines for projects and restoration of explored areas, in addition to requiring prior consultations with affected communities to ensure "respect for traditional maritime practices and local culture."