19 June 2026

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. Email us to contribute!

Announcements
Upcoming Events

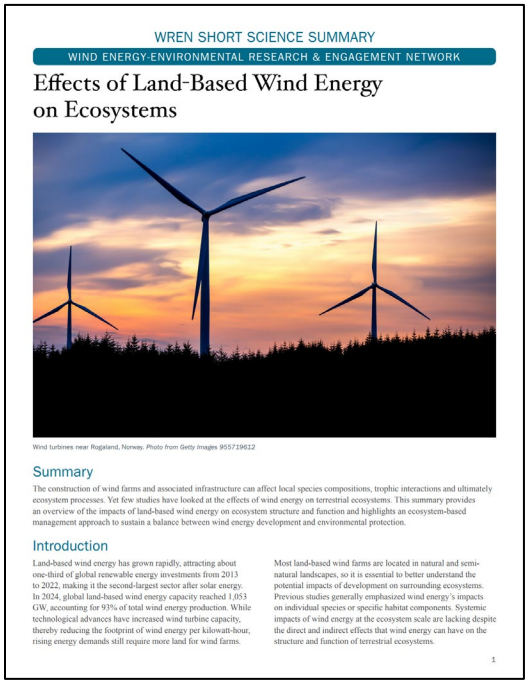
Marine Energy Documents
Wind Energy Documents

Marine Energy News
Wind Energy News

Announcements

New Short Science Summaries

The Wind Energy-Environmental Research & Engagement Network (WREN) has published two new Short Science Summaries, Effects of Land-Based Wind Energy on Ecosystems and Bird Behavior and Physiology: Implications for Collision and Displacement Risk, on Tethys.



WREN SHORT SCIENCE SUMMARY

WIND ENERGY-ENVIRONMENTAL RESEARCH & ENGAGEMENT NETWORK

Effects of Land-Based Wind Energy on Ecosystems

Wind turbines near Rogaland, Norway. *Photo from Getty Images 955719612*

Summary

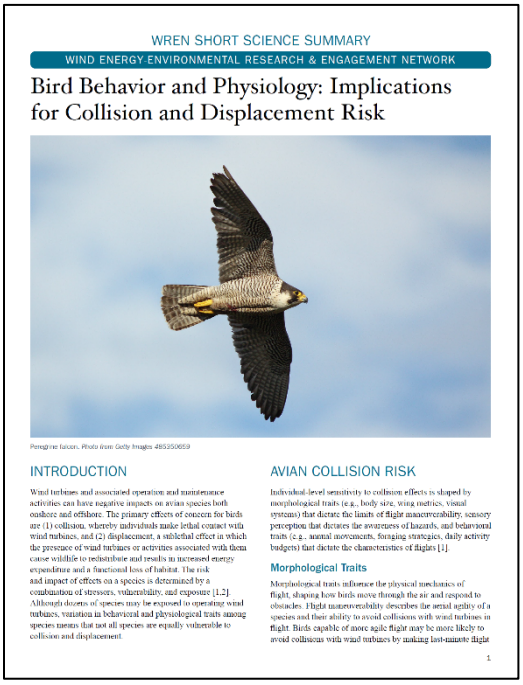
The construction of wind farms and associated infrastructure can affect local species compositions, trophic interactions and ultimately ecosystem processes. Yet few studies have looked at the effects of wind energy on terrestrial ecosystems. This summary provides an overview of the impacts of land-based wind energy on ecosystem structure and function and highlights an ecosystem-based management approach to sustain a balance between wind energy development and environmental protection.

Introduction

Land-based wind energy has grown rapidly, attracting about one-third of global renewable energy investments from 2013 to 2022, making it the second-largest sector after solar energy. In 2024, global land-based wind energy capacity reached 1,053 GW, accounting for 93% of total wind energy production. While technological advances have increased wind turbine capacity, thereby reducing the footprint of wind energy per kilowatt-hour, rising energy demands still require more land for wind farms.

Most land-based wind farms are located in natural and semi-natural landscapes, so it is essential to better understand the potential impacts of development on surrounding ecosystems. Previous studies generally emphasized wind energy's impacts on individual species or specific habitat components. Systemic impacts of wind energy at the ecosystem scale are lacking despite the direct and indirect effects that wind energy can have on the structure and function of terrestrial ecosystems.

1



WREN SHORT SCIENCE SUMMARY

WIND ENERGY-ENVIRONMENTAL RESEARCH & ENGAGEMENT NETWORK

Bird Behavior and Physiology: Implications for Collision and Displacement Risk

Peregrine falcon. *Photo from Getty Images 485350659*

INTRODUCTION

Wind turbines and associated operation and maintenance activities can have negative impacts on avian species both onshore and offshore. The primary effects of concern for birds are (1) collision, whereby individuals make lethal contact with wind turbines, and (2) displacement, a sublethal effect in which the presence of wind turbines or activities associated with them cause wildlife to redistribute and results in increased energy expenditure and a functional loss of habitat. The risk and impact of effects on a species is determined by a combination of stressors, vulnerability, and exposure [1,2]. Although dozens of species may be exposed to operating wind turbines, variation in behavioral and physiological traits among species means that not all species are equally vulnerable to collision and displacement.

AVIAN COLLISION RISK

Individual-level sensitivity to collision effects is shaped by morphological traits (e.g., body size, wing metrics, visual systems) that dictate the limits of flight maneuverability, sensory perception that dictates the awareness of hazards, and behavioral traits (e.g., annual movements, foraging strategies, daily activity budgets) that dictate the characteristics of flights [1].

Morphological Traits

Morphological traits influence the physical mechanics of flight, shaping how birds move through the air and respond to obstacles. Flight maneuverability describes the aerial agility of a species and their ability to avoid collisions with wind turbines in flight. Birds capable of more agile flight may be more likely to avoid collisions with wind turbines by making last-minute flight

1

New Tethys Story

The Movement Patterns of Migratory Fish in Scottish Coastal Waters: Evidence to Inform Offshore Renewable Development by Diadromous Fish Team of Marine Directorate

The Scottish Government Marine Directorate leads a programme of research to better understand the movement of migratory fish in Scottish coastal waters and to assess the potential for interaction with offshore marine renewable developments. With the increase of offshore windfarms in Scottish waters, data from acoustic telemetry studies and epipelagic trawling surveys, combined with Genetic Stock Identification (GSI), aim to provide critical evidence to support sustainable offshore renewable developments. Learn more in the latest Tethys Story.

Survey on Marine Energy in Tropical & Subtropical Countries

OES-Environmental is conducting a short survey to collect information about the potential environmental effects of marine energy development in tropical and subtropical countries. We are looking for information on any active or planned marine energy projects in these regions; any research, monitoring, or modeling efforts; and any relevant literature or other resources. We are also looking for contacts and/or organizations with experience and interest in these areas.

ORISE Applications Open

Applications for the U.S Department of Energy (DOE) Oak Ridge Institute for Science and Education (ORISE) Science and Technology Fellowship are now open! ORISE offers early-career professionals the opportunity to contribute their expertise to energy research by guiding strategy, designing funding programs, and managing projects. Apply by 31 July 2026.

NSF Request for Information

The U.S. National Science Foundation Directorate for Technology, Innovation and Partnerships (NSF TIP) recently introduced the NSF Tech Accelerators initiative to enhance the process of transforming research outputs from basic research into scalable, market-ready technologies that strengthen the U.S. economy and enhance national security. NSF has released a Request for Information on the NSF Tech Accelerator program model, organizational structures, and suitable deep-tech areas (including ocean technologies). Respond by 14 July 2026.

Calls for Abstracts & Proposals

The Call for Town Halls and Panel Sessions for OCEANS 2026 Monterey is open until 20 July 2026. OCEANS 2026 Monterey will take place on 21–24 September 2026 in Monterey, California, USA.

The Association of Fish and Wildlife Agencies (AFWA) has opened the Call for Workshop & Related Meeting Requests for the 116th Annual AWFA Meeting until 14 August 2026. The meeting will take place on 14-18 September 2026 in Lancaster, Pennsylvania, USA.

The Call for Abstracts for the European Energy Research Alliance (EERA) DeepWind 2026 Conference is open until 14 October 2026. The EERA DeepWind conference will take place on 13-15 January 2027 in Trondheim, Norway.

Funding & Testing Opportunities

University of California San Diego has opened applications for the StartBlue Ocean Enterprise Accelerator, which is an intensive immersive program designed to help ocean intelligence startups launch and scale to support the ocean enterprise. Apply by 21 June 2026.

Oregon State University (OSU) is seeking Proposals from qualified Marine Operations Consultants to provide advisory services to the PacWave wave energy test site by performing technical reviews, operational assessments, risk-based evaluations, and other activities. Proposals are due 24 June 2026.

Interreg North Sea has launched the 4th Support Call for the OASIS Accelerator Programme, which supports start-ups and SMEs from the North Sea region with technical and commercial trainings, networking opportunities, and a dedicated Pressure Cooker event on 21–24 September 2026 in Hamburg, Germany, hosted by The German Aerospace Center. Apply by 6 July 2026.

VentureWell has opened applications for Stage 1 of its Ocean Enterprise Accelerator, which supports U.S. innovators with the development, commercialization, and adoption of new ocean data technologies and services. Apply by 7 July 2026.

Fondation OPEN-C has opened the OPEN SEA Demo call for offshore technology developers to test their technologies in real sea conditions at the grid-connected SEM-REV offshore test site. Apply by 10 July 2026.

UK Research and Innovation (UKRI) has opened applications for the Clean Maritime Demonstration Competition 7: Deployment trials, which will fund real world demonstrations of innovative clean maritime technologies in an operational setting. UK organizations and collaborators can apply by 15 July 2026.

The Offshore Wind Innovation Hub Innovator Program, which supports the advancement of offshore wind in New York and across the U.S. by accelerating impactful and scalable innovations, has opened its 2026 Call for Innovators. The program is seeking offshore wind technologies that can maximize the performance and value of existing and near-term projects, including environmental monitoring and coexistence technologies. Apply by 27 July 2026.

Ocean Exchange, in partnership with the Marine Environmental Observation, Prediction and Response Network (MEOPAR), has launched a new Call for Solutions focused on advancing ocean, Great Lakes, and St. Lawrence River sustainability through the innovative use of artificial intelligence and ocean data. One Canadian startup, nonprofit, researcher, or organization will receive a CAD $100,000 Ocean Exchange Neptune Award. Apply by 25 August 2026.

The U.S. Testing Expertise and Access for Marine Energy Research (TEAMER) program, which supports marine energy testing and development projects, is accepting Request for Technical Support (RFTS) 19 applications until 2 October 2026. TEAMER now provides expertise, non-open water, and open water support, as well as commercialization support.

Career & Internship Opportunities

[C]Worthy is looking for a Postdoctoral Research Scientist to develop a one-dimensional OAE process-model testbed within the C-Star modeling system and a Postdoctoral Research Scientist to work on the development of a high-resolution Ocean CDR Atlas dataset for the West Coast of North America. Apply by 24 June 2026.

France Energies Marines is seeking a Head of Wildlife & Interactions Department, which is structured around three main areas: studying interactions between offshore wind energy and wildlife, implementing measures for anticipating, avoiding, and reducing impacts, and supporting and advising the various stakeholders in the sector. Apply by 5 July 2026.

Ørsted is hiring a Senior Onshore Permit Manager who will be involved in leading a range of environmental and permitting topics to support both renewable energy permitting and development. Apply by 8 July 2026.

The University of Victoria and Institute for Integrated Energy System are offering opportunities for one Doctoral student and one Master of Science graduate student to help direct innovative research at the intersection of ocean renewable resources, technology development, and integrated value to communities and utilities.

Upcoming Events

The Tethys Events Calendar highlights key events from around the world related to wind and marine energy, including conferences, webinars, workshops, and more.

Upcoming Webinars

Interreg North Sea's Anemoi project is hosting the 2nd Anemoi Stakeholder Event on 20 June 2026 at 2:00pm CEST (12:00pm UTC). The event will feature presentations on the project and its next steps, chemical emissions from offshore wind to the marine environment, differences in offshore regulations, and potential effects from offshore wind leachates.

Renewable Energy Wildlife Institute (REWI) is continuing its *Technology Catalog webinar series* with a new topic: Wings Unharmed: Global Approaches to Mitigating Wildlife Collisions, which will feature risk minimization technologies from the REWI Technology Catalog.

- Part 1 will take place on 22 June 2026 at 1:00pm EDT (5:00pm UTC) and will feature Turbine Integrated Mortality Reduction (TIMR) and ThruTracker.
- Part 2 will take place on 23 June 2026 at 12:00pm EDT (4:00pm UTC) and will feature Optimized Smart Curtailment™ (OSC™) and Thermal Tracker 3D.

- Part 3 will take place on 25 September 2026 at 12:00pm EDT (4:00pm UTC) and will feature Song Meter® with Analysis and Remote Transfer (SMART™) and Acoustic and Thermographic Offshore Monitoring (ATOM).

Dutch Marine Energy Centre (DMEC), in collaboration with the North Sea Energy project, is hosting a Deep Dive on Protecting Offshore Energy Infrastructure on 23 June 2026 from 3:00-5:00pm CET online and at the DMEC office in The Hague, Netherlands. Register here.

The Pacific Offshore Wind Consortium (POWC) is hosting a webinar, "Introducing the California Offshore Wind Environmental Monitoring Framework", on 23 June 2026 at 11:00am PDT (6:00pm UTC). The webinar will feature a discussion with the California Marine Sanctuary Foundation and Cal Poly San Luis Obispo on monitoring recommendations and next steps.

France Energies Marines is hosting a webinar, "Biocolonisation improved knowledge to optimise monitoring of offshore renewable energy systems", on 25 June 2026 from 12:00–2:00pm UTC. The webinar will present the main outputs from the BIODHYL project, which set out to gain a better understanding of the early stages of biocolonisation of an offshore structure by studying the organisms involved and how their populations evolve over time and in response to the environment.

Renewables Grid Initiative (RGI) and Med OCEaN (Offshore Coalition for Energy and Nature) are hosting a webinar, "Sustainable Seas, Safer Skies: Lessons from MIGRALION in the Mediterranean", on 25 June 2026 from 2:30–3:30pm CEST (12:30–1:30pm UTC). The webinar will dive into the French research programme MIGRALION, which focuses on the Gulf of Lion in France, a critical hotspot for seabirds, migratory birds, and bat species.

Ocean Energy Europe, along with the International Renewable Energy Agency (IRENA) and the European Commission, is hosting a webinar, "Global ocean energy resource report: The largest untapped renewable energy resource", on 29 June 2026 from 1:00-2:00pm CEST (11:00am-12:00pm UTC). The webinar will present the key findings of the first Global Ocean Energy Resource Report, which is a literature review bringing together existing studies to quantify the worldwide ocean energy generation potential.

REWI is also hosting a webinar, "Advancing Bat Compensatory Mitigation: From Research Pathways to Innovative Solutions", on 1 July 2026 at 12:00pm EDT (4:00pm UTC). This webinar will explore approaches to bat compensatory mitigation, featuring an overview of White-Nose Syndrome and conservation actions implemented through the national response plan, including updates on innovative research efforts designed to improve survival and recovery of WNS-impacted bat species.

A research team from the University of Delaware is hosting a webinar on 1 July 2026 from 12:00-1:00pm EDT (4:00-5:00pm UTC) to share the results of a recent Sea Grant-funded research project aimed at understanding community perceptions of offshore wind power development in coastal and near-coastal towns in Delaware, Maryland and New Jersey.

The Biodiversity Consultancy is hosting a webinar, "Biodiversity Risk Screening and Critical Habitat Assessment: good practice and lessons from wind and solar projects", on 3 July 2026 at 12:00pm UTC. The webinar will cover key challenges in critical habitat assessments for wind and solar, practical solutions and specialist interpretation approaches, best practices for de-risking development planning, and strategies for effective biodiversity impact mitigation.

The New York State Energy Research and Development Authority's (NYSERDA) Offshore Wind Team is hosting a *Learning from the Experts* webinar, "Protected Species Observers for Offshore Wind", on 15 July 2026 from 12:00-1:00pm EDT (4:00-5:00pm UTC). In this webinar, Sarah Fortuna with A.I.S. Inc. will discuss the work of protected species observers in infrastructure development in the marine environment, including offshore wind development.

The National Laboratory of the Rockies (NLR) is hosting the next webinar its *Marine Energy Microgrid and Power Electronics Webinar Series*, "Microgrid Power Hardware-in-the-Loop Modeling," on 10 August 2026 at 12:00pm MDT (6:00pm UTC) and will demonstrate NLR's power hardware-in-the-loop (HIL) microgrid model for marine energy integration with microgrid testing. This demonstration will feature a repurposed tidal energy generator mounted on NLR's 20-kW test bench connected to a bidirectional grid emulator and an HIL device.

The Portal and Repository for Information on Marine Renewable Energy (PRIMRE) is hosting a webinar, "From Design to Ocean Deployment: Lessons Learned from the SURF-WEC Project in Hawaii," on 11 August 2026 from 1:00–2:00pm MDT (7:00–8:00pm UTC). Join for an in-depth overview of the Small Underwater Research Flap Wave Energy Converter (SURF-WEC), a 1m x 1m oscillating surge device developed by NLR in partnership with the Hawai'i Marine Energy Center (HMEC), which has been successfully deployed off the coast of Oahu, Hawaii.

Upcoming Conferences

Net Zero Atlantic is hosting the Atlantic Canada Offshore Wind Readiness Forum 2026 on 16 September 2026 in Halifax, Nova Scotia, Canada. Early bird registration is available through 8 July 2026.

Ocean Energy Europe (OEE) and the Dutch Energy from Water Association (EWA) are co-hosting the 2026 International Conference on Ocean Energy (ICOE) and OEE Conference on 5-7 October 2026 in The Hague, Netherlands.

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

Entanglement risk of marine animals in the mooring lines of marine energy devices and oceanographic instruments – Hemery et al. 2026

Floating and submerged structures in the ocean, such as marine energy devices and relevant oceanographic instruments, use mooring lines tethered to them and to an anchor to hold them in place on the seafloor. Mooring lines and mooring systems may be fabricated from a variety of materials in different configurations depending on the type of device to be tethered, the depth, and the seafloor topography of the location. As the marine energy industry and the need for ocean observation increase, concerns around the effects of devices, mooring systems, and moored observing equipment will need to be addressed to minimize potential risks to marine animals. One such concern is the potential for marine mammals, sea turtles, large fish, diving seabirds, and other marine animals to become entangled in mooring systems and lines associated with devices and buoys.

The Third World Ocean Assessment (WOA III) – United Nations 2026

The third World Ocean Assessment (WOA III), the only global integrated assessment of the world's ocean covering environmental, economic and social aspects, is the main output of the third cycle of the Regular Process for Global Reporting and Assessment of the States of the Marine Environment, including Socioeconomic Aspects. WOA III is a collective effort of interdisciplinary writing teams made up of more than 650 experts, providing an important scientific basis for the consideration of ocean issues by Governments, intergovernmental processes, and all policy-makers and others involved in ocean affairs. It provides scientific information on the state of the marine environment in a comprehensive and integrated manner to support decisions and actions for the achievement of Sustainable Development Goals.

Integrating biodiversity conservation into renewable energy development under the European Green Deal: A comparative analysis of national policies in France, Italy and Spain – Hajdukovic and Jessel 2026

This paper examines how France, Italy, and Spain integrate biodiversity conservation into renewable energy development under the European Green Deal (EGD). Based on a qualitative analysis of 46 national policy documents, we provide a comparative assessment of how these countries address the synergies and trade-offs between individual renewable energy sources (RES) and biodiversity, as well as the planned or implemented measures to manage them. Our results reveal that, while national policies address several links between RES and biodiversity, critical areas still require further management. Specific attention should be given to mitigating the impacts of changes in land use associated with bioenergy production and the installation of onshore wind and solar infrastructure on biodiversity and ecosystems.

Wind Energy

A spatially explicit environmental performance indicator accounting for different life-cycle impact pathways of onshore wind energy infrastructure – Reto et al. 2026

Environmental impact assessments (EIAs) are commonly used to identify negative effects of onshore wind farm projects on biodiversity and ecosystem services, but in practice they are often hampered by the lack of locally validated data. This reduces the robustness of decision-making, undermines stakeholder trust, and exacerbate local resistance. Methodological inconsistencies between EIAs and strategic environmental assessments (SEAs) further hinder the integration of environmental considerations across scales. In this study, existing life cycle assessment (LCA)–based biodiversity impact methods are extended to spatially quantify both direct and indirect effects of onshore wind energy on ecosystem services. The presented environmental performance indicator (NEP) for wind energy developments allows the consistent integration of impacts on ecosystem services and biodiversity.

Machine learning-based ensemble species distribution models to guide monitoring and survey design for offshore wind – Ingram et al. 2026

The rapid expansion of offshore wind energy raises concerns about potential impacts on marine wildlife, yet development often outpaces the capacity for ecological assessment. Data-limited species in offshore environments are particularly challenging to monitor, constraining the ability to evaluate potential risks and design evidence-based management strategies across large marine areas. We present a novel, scalable framework based on ensemble machine learning methods, including shallow neural networks, to predict species distribution across extensive, data-limited marine systems. By combining multiple algorithms with high-resolution environmental predictors, the framework reduces model-specific bias, improves predictive reliability, and generates transparent, reproducible spatial predictions of species occurrence.

Synergies and trade-offs between biodiversity and distance to settlements in the spatial allocation of wind power – Luukkonen et al. 2026

The need to phase out fossil energy has promoted a rapid development of wind power, yet this development may negatively affect biodiversity and encounter resistance among local citizens. To study whether optimal locations for wind power differ when considering biodiversity impacts or distance to settlements, we used spatial suitability analysis for allocating wind power in Pirkanmaa region in southern Finland. We clustered high-suitability areas using Anselin Local Moran's I cluster analysis to find spatially contiguous areas for wind power. We compared the results of biodiversity-based and settlement-based allocation in three scenarios for electricity production for the year 2035: the Minimum scenario corresponded to the current production-consumption ratio in the region, the Self-sufficiency scenario to regional electricity self-sufficiency, and the Maximum scenario to the maximum production capacity.

News & Press Releases

Marine Energy

Seaturns validates the deployment of its demonstrator in the Atlantic and announces a collaboration with ESB, Ireland's leading energy company – Seaturns

> Seaturns, France's pioneering wave energy technology company, announces the successful deployment of its full-scale demonstrator off the Gironde estuary on the French Atlantic coast — a first in France — marking the commencement of an offshore trial campaign of a minimum of 12 months. The program represents a critical de-risking milestone on the company's path to commercial deployment and technology certification by 2027. The trial period will be monitored by ESB, Ireland's foremost energy company, under an industrial innovation collaboration, providing Seaturns with an industry perspective from one of Europe's most respected energy utilities. The deployment of the Seaturns full-scale wave energy demonstrator S1 is a first in France and represents a landmark moment for the wave energy sector in Europe.

Eco Wave Power Explores AI-Powered Wave Energy Infrastructure and WaveGPT Development with Florida Atlantic University and University of Michigan – Eco Wave Power

> Eco Wave Power, a leading onshore wave energy technology company, recently announced that it is advancing discussions with Florida Atlantic University (FAU) and the University of Michigan regarding the development of AI-powered wave energy applications, WaveGPT, and next-generation wave-powered coastal data center infrastructure designed to support the rapidly growing energy demands of artificial intelligence. The discussions took place during a strategic meeting held at Florida Atlantic University, bringing together leading experts in marine renewable energy, artificial intelligence, digital twins, electrical engineering, ocean engineering, and energy systems optimization. The initiative focuses on two complementary tracks designed to position Eco Wave Power at the intersection of renewable energy and AI infrastructure.

Can tidal power turbines and fish co-exist? New Nova Scotia project to find out – The Chronicle Herald

> Tidal power is an emerging sector globally and the immense tidal resource of a narrow channel in Nova Scotia could eventually deliver an estimated 2,500 megawatts of renewable energy to Canada's power grid. But first, a group of researchers want to know if underwater turbines can generate clean energy without harming the Bay of Fundy's marine ecosystem. The Fundy Ocean Research Centre for Energy (FORCE) is retrofitting a former tidal power platform into a research station designed to monitor fish and marine life in the Bay of Fundy's Minas Passage. FORCE is the research and test centre for tidal stream energy, providing offshore and onshore electrical equipment to connect devices to the power grid. The 32-metre-long former Sustainable Marine Energy floating tidal platform, known as PLAT-I 6.40, will become a key component of FORCE's Ocean Sensor Innovation Platforms (OSIP) project, a multi-year initiative aimed at improving environmental monitoring around tidal energy devices.

Wind Energy

France Launches Massive Tender for Seven Floating, Four Fixed-Bottom Offshore Wind Farms – Offshore Wind

The French government published a call for tenders notice in the Official Journal of the European Union on 11 June 2026, launching the process to award development rights for eleven offshore wind projects, seven floating and four fixed-bottom, totalling a little over 10 GW. The offshore wind sites offered through this tender are located off the coasts of Normandy and Brittany, in the South Atlantic and in the Mediterranean Sea. The deadline for the submission of tenders is set to 12 October 2026. According to procurement information on the website of the French Energy Regulatory Commission (CRE), interested developers can submit information requests until 19 July. The French government announced earlier this year that it planned to award around 10 GW of offshore wind capacity by combining AO9 and AO10 tenders, with results expected by the end of 2026 or early 2027.

Tens of thousands of new jobs and more than £18 billion boost to British economy as Prime Minister meets Japanese leader – UK Government

The UK and Japan are expected to agree investment creating tens of thousands of new jobs and more than £18 billion in economic gains, alongside a new partnership at the forefront of next-generation technologies. At the heart of the visit will be a landmark Offshore Wind Compact, developed in close partnership with Great British Energy to unlock up to £9 billion in Japanese investment into the UK's offshore wind sector. It will support the development of 5.9GW of floating offshore wind projects in the UK, including the Ossian and Green Volt projects off the East Coast in Scotland alongside the Erebus project in the Celtic Sea. These pioneering projects will support jobs across the country, and when built, generate enough clean electricity to power 8 million homes.

Largest wind farm in the United States slated to begin commercial operations – U.S. Energy Information Administration

The SunZia Wind Project, the largest wind farm in the United States, is slated to begin commercial operations this month. The wind farm, located in New Mexico, has a total net summer generating capacity of 3,650 megawatts (MW) and is composed of 916 wind turbines. SunZia's capacity is more than three times larger than the next two largest wind farms, Alta Wind in Southern California (1,098 MW) and Great Prairie in northern Texas (1,027 MW). The SunZia Wind Project works with a high voltage transmission line to deliver the wind power generated to Arizona and California. Pattern Energy started construction of the SunZia Wind Project in 2023, after almost two decades of permitting and planning. The wind farm spans three counties. The northern part of SunZia located in San Miguel and Lincoln counties has 242 turbines, while the southern part in Lincoln and Torrance counties has 674 turbines. By April 2026, some of the wind turbines were producing power and contributing to the grid during a testing phase.