PRIMRE BLAST

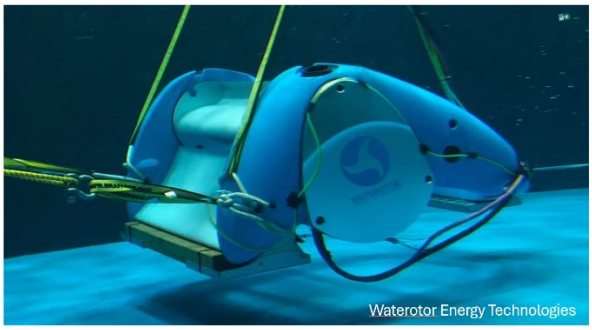
1 May 2026

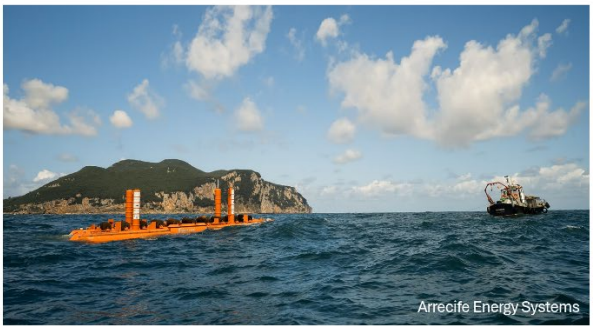
The Portal and Repository for Information on Marine Renewable Energy (PRIMRE) provides access to marine energy data, information, and resources in the U.S. and internationally. The bi-weekly PRIMRE Blast highlights relevant announcements and upcoming events; new content in the Knowledge Hubs; and international marine energy news. Email us to contribute!

Announcements

Marine Energy Photo Library

The Marine Energy Photo Library on Tethys Engineering contains over 900 photos of marine energy devices, test sites, and monitoring technologies from nearly 80 organizations. These high-resolution photos are free to use with developer attribution. Email us to contribute!





SCGSR Applications Open

The U.S. Department of Energy (DOE) Office of Science Graduate Student Research (SCGSR) program is accepting applications for its 2026 solicitation. The program provides supplemental funds for U.S. graduate awardees to conduct part of their PhD thesis research at a host facility/ laboratory in collaboration with a DOE National Laboratory scientist. Apply by 6 May 2026.

INORE Symposium Applications Open

The International Network on Offshore Renewable Energy (INORE) is accepting applications for its 2026 symposiums. The North America symposium will take place from 27 July to 1 August 2026 in Hoboken, New Jersey, USA, followed by the European symposium from 27 September to 4 October 2026 in Bilbao, Spain. Applications are due by 8 May 2026.

U.S. Knauss Fellowship Applications Open

The National Sea Grant College Program is accepting applications for its 2027 Knauss Fellowship Program, which places graduate students interested in ocean, coastal and Great Lakes resources in executive and legislative offices where they contribute to real-world policy work. Apply by 3 June 2026.

Calls for Abstracts & Proposals

The Call for Abstracts for OCEANS 2026 Monterey has been extended through 4 May 2026. The conference will take place on 21–24 September 2026 in Monterey, California, USA.

The Call for Abstracts for the 2026 University Marine Energy Research Community (UMERC) Annual Conference and Marine Energy Technology Symposium (METS) has been extended through 10 May 2026. UMERC/METS 2026 will take place on 4–6 August 2026, at Stevens Institute of Technology in Hoboken, New Jersey, USA.

Marine Renewables Canada has opened the Call for Research & Technical Track Abstracts and the Call for Member Workshop Proposals for the Marine Renewables Canada 2026 Conference & Exhibition through 15 May 2026. The conference will take place on 17–19 November 2026 in Ottawa, Ontario, Canada.

The Call for Abstracts for the 3rd Australian Ocean Renewable Energy Symposium (AORES) is open through 31 May 2026. AORES will take place 9–11 November 2026 in Adelaide, Australia.

Funding & Testing Opportunities

The Scottish Government has opened applications for the Marine Fund Scotland for 2026–27, which is focused on supporting projects that deliver outcomes relating to Scotland's Blue Economy Vision. The closing date for the first round of applications is 15 May 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) 18 applications until 5 June 2026. TEAMER now provides expertise, non-open water, and open water support, as well as commercialization support.

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. Information sessions will take place on 1 May, 27 May, and 12 June 2026. Apply by 21 June 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. VentureWell is hosting an information session on 18 May 2026 from 3:00–4:00pm EDT (7:00–8:00pm UTC). Apply by 7 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.

Career Opportunities

Sandia National Laboratories is looking for a Postdoctoral Appointee - Marine and Wind Energy Systems to join its Aerodynamic Technology & Energy Systems department and conduct basic and applied research for marine environments and hydrokinetic energy systems.

The Institute of International Education (IIE) has opened applications for the Ocean Futures Fellowship, which provides training, educational projects, professional development, and mentorship over a six-month full-time program. Apply by 3 May 2026.

Heriot-Watt University, in partnership with the Scottish Government and Orkney Islands Council, is offering an Island Scholarship to help fund the tuition fees for UK and international students on three full-time programs at its Orkney campus: MSc Marine Renewable Energy, MSc Renewable and Sustainable Energy Transition, and MSc International Marine Science. Apply by 11 May 2026.

Howell Marine Consulting (HMC) is hiring a Senior Consultant to deliver projects focused on blue economy development in the UK and internationally, including strategy and policy (e.g. fisheries management, marine spatial planning, offshore energy/renewables, natural capital, ocean finance). Apply by 13 May 2026.

European Marine Energy Centre (EMEC) is seeking a Finance & People Director to provide strategic leadership across finance, people and organizational development, and play a central role in shaping the organization’s long-term sustainability, culture and performance. Apply by 19 May 2026.

The University of Manchester is offering a funded PhD project (for UK students only) focused on developing next-generation tools for tidal stream turbine array design. This project will develop a suite of rapid, physics-based design tools to capture wave transformation across turbine arrays and resulting loads to inform array layouts. Apply by 31 May 2026.

Delft University of Technology (TU Delft) is looking for a Postdoctoral Researcher in Digital Ocean Twins for Marine Energy Applications. The work will focus on high-fidelity wave modelling and the development of advanced frameworks for "what-if" scenario analysis. Apply by 31 May 2026.

Upcoming Events

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

Upcoming Webinars

The Copernicus Marine Service is hosting an *Ocean Sessions* webinar, "Teaching the Ocean: Data & Tools", on 5 May 2026 from 10:00am–12:00pm CEST (8:00–10:00am UTC). The session, dedicated to professors and educators, will begin with an introduction to the Copernicus Marine Service, followed by an overview of educational resources, including visualization tools, data access services and ready-to-use materials tailored for academic use.

Fundy Energy Research Network (FERN), in partnership with Acadia University, Marine Renewables Canada, Fundy Ocean Research Centre for Energy (FORCE), and the Government of Canada, is hosting a webinar, "The Power of Environmental Data: Advancing Tidal Energy Responsibly", on 14 May 2026 at 12:00pm ADT (3:00pm UTC). Dr. Andrea Copping will share how structured approaches and internationally developed tools from OES-Environmental can help streamline data and support more efficient and responsible growth of the tidal energy sector.

Pacific Marine Energy Center (PMEC) is hosting its Spring Seminar on 14 May 2026 at 2:00pm PDT (9:00pm UTC). During the seminar, Dr. Kate Van Ness, Senior Research Engineer at the University of Washington (UW) Applied Physics Laboratory (APL) will present on Axial-Flow Tidal Turbine Research at APL-UW: Lessons from Modeling, Flume Testing, and Field Testing.

The National Laboratory of the Rockies (NLR) is hosting a *Marine Energy Microgrid and Power Electronics Webinar Series* to provide an introduction to its water power facilities and capabilities. The series will feature marine energy technologies such as modeling tools and hardware-in-the-loop capabilities.

- "Advancing Power Electronics for Wave Energy Converters" will take place on 8 June 2026 at 12:00pm MDT (6:00pm UTC) and provide a deeper understanding of advanced power electronic solutions to unique challenges in wave energy that improve the efficiency and performance of wave energy converters.
- "Microgrid Power Hardware-in-the-Loop Modeling" will take place 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.

Upcoming Workshops

The OES-Environmental team at PNNL is hosting an interactive workshop, From Evidence to Action: Applying Data Transferability to Simplify Marine Energy Permitting, at the 2026 Ocean Renewable Energy Conference (OREC) + Marine Energy Collegiate Competition (MECC) from 8:00–10:00am PDT on 19 May 2026 in Portland, Oregon, USA.

The Triton Initiative team at PNNL, in collaboration with OES-Environmental and the Pacific Marine Energy Center, is also hosting an interactive workshop, From Risk to Readiness: Mapping Environmental Effects and Information Needs, at OREC+MECC 2026 from 1:00–3:00pm PDT on 19 May 2026 in Portland, Oregon, USA.

New Documents on Tethys Engineering

Tethys Engineering hosts thousands of documents on the technical aspects of marine energy research and development, including journal articles, conference papers, and reports.

Feasibility study of a tidal energy site in the Piscataqua River, New Hampshire, using large-eddy simulation – Aksen et al. 2026

> Tidal energy systems are inherently site-specific, with their potential strongly influenced by local topography and bathymetry. Field-scale simulations, supported by high-resolution digital mapping of narrow tidal channels, are crucial for capturing turbulent flow dynamics and optimizing reliable energy extraction. This study presents large-eddy simulations (LES) of a 6 km stretch of the Piscataqua River in Portsmouth Harbor, NH, to support the deployment of tidal turbine arrays under both ebb and flood conditions. The digital elevation model of the river was reconstructed using a combination of remote sensing data and field measurements. The study aims to (*i*) generate a high-resolution digital map of the river, (*ii*) evaluate the imposition of accurate turbulent inflow boundary conditions for hydrodynamic evaluation, (*iii*) identify potential sites based on the power density of the tidal flow predicted using LES, and (*iv*) assess the performance of various turbine arrays at the selected site.

Integrated performance and risk assessment of co-located wave energy and offshore aquaculture systems under operational uncertainty – Bao et al. 2026

> In recent years, Multi-purpose Offshore Platforms (MPOP) have emerged as a novel solution to address the increasing global food and energy demand. Beyond the conceptual and qualitative analysis, this paper develops a hybrid quantitative framework to evaluate the life-cycle performance of co-located Wave Energy Converters (WECs) and offshore aquaculture (AQ) systems. The framework integrates hydrodynamic numerical

simulations and probabilistic reliability analysis into a System Dynamics (SD) model to simulate complex subsystem interactions and quantify the system productivity and economic feasibility under environmental and operational uncertainty. A case study in Southern Tasmania demonstrates that the upstream WEC farm effectively reduces the incoming wave heights by up to 23%, mitigating aquaculture mooring tensions of the downstream salmon farm by 18%.

Techno-economic analysis of Ocean Thermal Energy Conversion (OTEC): The influence of cold seawater depth – Adiputra et al. 2026

Ocean Thermal Energy Conversion (OTEC) is a promising renewable energy technology that utilizes the temperature difference between surface and deep seawater to generate electricity. However, its implementation faces significant challenges, particularly related to the design and cost of cold seawater intake infrastructure. This study investigates the influence of deep seawater intake depth (350, 400, 500, 600, and 700 m) on the technical performance and economic feasibility of an OTEC system using Manado Bay, Indonesia, as a case study. Temperature profiles derived from HYCOM data were combined with a single-stage Rankine cycle model to evaluate system efficiency, component sizing, and the Levelized Cost of Electricity (LCOE). The thermodynamic model was validated against experimental results reported in the literature, showing good agreement and confirming the reliability of the adopted approach.

Marine Energy Atlas Highlights

The Marine Energy Atlas is an interactive mapping tool that maps high-resolution, spatially comprehensive data on global wave, tidal, riverine, ocean current, and ocean thermal resources.

West Coast Wave Hindcast Data Through 2020 Live on the Marine Energy Atlas

The Marine Energy Atlas features 42 years of modeled wave data along the West Coast – including at PacWave! Users can now visualize data through 2020, download small datasets straight from the Atlas, or head over to AWS for the full .h5 yearly datasets. This wave hindcast dataset, brought to you by the National Lab of the Rockies, Pacific Northwest National Laboratory, and Sandia National Laboratories, contains the highest-resolution time-series data on wave attributes in U.S. waters. Using the UnSWAN and WaveWatch III models, wave resource and long-term wave bulk parameters were simulated and subsequently validated with buoy data, to create an unstructured grid with a spatial resolution as fine as 100 to 200 meters in shallow water and a 3-hour time step. For questions, comments, or suggestions for improvement, please reach out to marineresource@nlr.gov.

Marine Energy Projects Database Updates

The Marine Energy Projects Database provides up-to-date information on marine energy projects, test sites, devices, organizations, and technologies around the world.

EMEC Scapa Flow Wave Test Site – EMEC

The EMEC Scapa Flow wave test site provides accessible at-sea testing options for subscale devices. The site is located in Scapa Flow, to the south of Kirkwall, and was chosen for its relatively benign waters which reach almost 0.35 m significant wave height. The testing area is 0.4 km by 0.9 km, situated in water depths of 21-25 m, with a predominant westerly wave regime and a mean annual significant wave height of 4 m. While the Scapa Flow test site is not grid-connected, EMEC provides support to set-up a microgrid to simulate grid connection. If required, the device under test will be connected to the test support buoy via two umbilical cables: one for power transmission and the other for control and communications.

Ocean Motion Puget Sound Pilot – Ocean Motion Technologies

In September 2025, Ocean Motion Tech (OMT) successfully conducted a commercial field deployment in Puget Sound, Washington, in collaboration with the Ocean Research College Academy (ORCA). The 6 week deployment signified a major milestone for OMT's small-scale wave energy technology, demonstrating its reliability, versatility, and readiness for commercial use. The field campaign showcased OMT's Surface Wave Energy Converter (S-WEC) system, which can power oceanographic sensors from wave energy. In this deployment, the OMT S-WEC powered a NexSens CB-1250 data bouy. This video highlights the technology, collaboration with NexSens, and deployment.

National Marine Comprehensive Test Site Zhoushan – National Ocean Technology Center

The National Marine Comprehensive Test Site Zhoushan is part of a larger test network off the coast of China referred to collectively as the National Marine Test Site. The four marine facilities are operated by the National Ocean Technology Center (NOTC) and stretch most of the length of China's coastline. The layout of the facilities is intended to service the Northern and Southern Coastlines as well as provide unique testing sites for shallow and deep water. While the NOTC claims marine activities in the areas began as early as 2009, the formal versions known today were officially compiled in May of 2018 by the NMTC and approved by the Ministry of Natural Resources. Zhoushan is located between Putuoshan Island and Huladao Island in Zhoushan City, Zhejian Province.

News & Press Releases

Riding the Ocean's Data: Modeling Advancements Could Help Developers Build More Robust, Seaworthy Devices – NLR

Numerical modeling tools reduce cost and risk in developing wave energy technologies by allowing systems to be tested and optimized before deployment. At NLR, researchers

are advancing wave energy modeling through integrated simulation effortss that combine hydrodynamics, device dynamics, and environmental conditions to support technology development and deployment. In practice, this means breaking a complex system into parts—how waves interact with a device, how the device moves in response, and how those interactions affect performance—and modeling each piece with specialized software tools. WEC-Sim and Capytaine provide complementary capabilities within this workflow: WEC-Sim models the dynamic behavior of wave energy converters (WECs) while Capytaine calculates hydrodynamic forces on floating structures.

Approval clears next step for tidal energy at Morlais – Morlais Energy

A regulatory decision has been granted this week, marking another important milestone for (Ynys Môn) Anglesey tidal energy scheme, Morlais. Natural Resources Wales has approved an application by Menter Môn Morlais Ltd to vary its existing marine licence, allowing different types of tidal technology to be deployed within the Morlais zone. The variation relates specifically to Tidal Technologies Ltd devices and supports the continued development of Morlais as a shared site for multiple tidal energy technologies, operating within a single licensed area. Tidal Technologies is one of five developers to have already secured capacity to deploy at Morlais through Allocation Rounds of the UK Government's Contracts for Difference (CfD) scheme. Earlier this year Tidal Technologies secured 3 MW in Allocation Round 7.

Installation of world's first purpose-built offshore platform for ocean heat energy completed – Global OTEC

UK-based Global OTEC, a pioneer in Ocean Thermal Energy Conversion (OTEC) development, has successfully installed the world's first purpose-built offshore platform designed to unlock continuous renewable energy from the temperature difference in the ocean. The company has completed the offshore installation of a floating platform prototype in the Canary Islands, potentially removing one of the longest-standing barriers to scaling OTEC for islands and coastal communities in the tropics and sub-tropics. OTEC generates electricity by harnessing the temperature difference between warm surface water and cold deep ocean water. OTEC has been successfully demonstrated onshore at small-scale, where existing deep ocean water intake facilities are available, but size and lengths of required pipes to provide seawater has limited the size of previous efforts.

Anglesey marine monitoring business secures £490,000 investment to scale AI-led technology for offshore renewables – Marine Energy Wales

Ecodetect, an Anglesey-based company specialising in AI-driven marine monitoring for offshore infrastructure, has secured a £490,000 equity investment to help scale its technology, create new jobs and support a new phase of growth in tandem with the UK's fast-expanding renewable energy sector. The equity investment will help the business strengthen its team over the next six months, with four new jobs created, and increase its ability to deliver its technology at scale as offshore and floating renewable energy

projects expand. Based at M-SParc on Anglesey, Ecodetect has developed an advanced eco-detection toolkit that combines artificial intelligence and machine learning with specialist programming to automatically identify and record wildlife interactions with marine infrastructure using data captured by underwater imaging sensors.

Cavan publican aims to run premises using power harnessed from river, in world first – The Irish Times

A Co Cavan pub is to seek planning permission to use a world-first technology that would allow the premises run on power from the river outside its front door. The technology is a small, floating turbine designed by Limerick firm GKinetic. It operates similar to the turbines used in major hydroelectricity plants, but these units – or pods – are just a couple of metres wide and can work in less than a metre of water. They are not fixed to the riverbed, so they can be lifted and repositioned easily. They also have sensors that tell them to move out of the way to let unexpected debris, boats or other objects pass by. Fergus Murphy of Murph's Gastro Pub in Butlers Bridge, Co Cavan, said he was hopeful they would be the answer to soaring electricity bills.