PRIMRE BLAST

15 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

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.

Marine Energy Career Panel Recording

Pacific Northwest National Laboratory (PNNL), National Laboratory of the Rockies (NLR), and Sandia National Laboratories (Sandia) recently hosted an informational Marine Energy Career Panel on 23 April 2026. During the webinar, U.S. Department of Energy (DOE) National Laboratory staff across various research disciplines will discuss their background, education, career path, and current projects. Watch the webinar recording here.

INORE Application Deadline Extended

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 now due by 15 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 Workshops & Tutorials for OCEANS 2026 Monterey is open until 26 May 2026, and the Call for Town Halls and Panel Sessions is open until 20 July 2026. OCEANS 2026 Monterey will take place on 21–24 September 2026 in Monterey, California, 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 29 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

Offshore Renewable Energy Sustainability Alliance (ORESA), an Interreg North-West Europe project, has extended the application deadline for its 2nd Belgian Hub Innovation Call, which offers small and medium-sized enterprises developing products, technologies, or services in the offshore energy sector to participate in an accelerator program on 7–10 September 2026 in Ostend, Belgium. Apply by 20 May 2026.

Oregon State University (OSU) is seeking proposals from qualified contractors to provide Remotely Operated Vehicle (ROV) survey services at the PacWave South test facility located offshore of Newport, Oregon, USA. Proposals are due 26 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 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

The University of New Hampshire's Department of Civil and Environmental Engineering is offering a fully funded PhD position in Structural Engineering that will focus on the design of wave energy converter hulls using Ultra-High-Performance Concrete.

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.

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 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.

Upcoming Conferences

The American Society of Mechanical Engineers is hosting the 45th International Ocean Offshore and Arctic Engineering Conference (OMAE 2026) on 7–12 June 2026 in Tokyo, Japan.

The Partnership for Research in Marine Renewable Energy (PRIMaRE) are hosting the 13th PRIMaRE Conference on 23–24 June 2026 in Loughborough, England.

The Offshore Energy and Storage Society (OSESS) is hosting the 10th Offshore Energy and Storage Symposium (OSES 2026) on 8–10 July 2026 in Delft, Netherlands.

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.

The interplay and incremental development of tidal stream arrays in the Pentland Firth – Patel et al. 2026

> The development of tidal stream energy sites is constrained by numerous practical, technical, and accessible constraints, including changes in the flow caused by the presence of the tidal farm. Large and complex sites are typically developed incrementally and may involve multiple developers. This regional modelling case study of the Pentland

Firth, widely regarded as one of the most significant global locations for tidal energy extraction, investigates these dynamics. This study examines scenarios for the incremental development of the Pentland Firth, incorporating assumptions regarding tidal farm design. The analysis considers a range of configurations, including variations in turbine density and the incorporation of shipping lanes within designated lease areas.

On the optimal performance of oscillating surge wave energy converter – Truong and Zuo 2026

The sequential process is a conventional procedure in designing an ocean wave energy converter, from mechanical systems to electrical loading. However, many studies do not consider the reciprocal influences between the two domains. Therefore, the potential of a wave energy converter has not been properly explored. In this paper, the performance of an oscillating surge wave energy converter driven by regular wave excitation is investigated, in which the dynamics of subsystems and their couplings are fully taken into account. We analytically determine the maximum possible power that can be harvested for a specific geometry of the wave capture structure. We further show that these geometric dimensions and the rest of the system can be optimized within a unified framework to maximize the output power under given ocean wave characteristics.

Power generation maximization framework with particle swarm optimization for ocean current turbine farms – Ondes et al. 2026

This paper presents an optimization framework for enhancing power generation in ocean current turbine (OCT) farms by arranging turbines within a defined spatial area. The turbines are anchored to the ocean floor and dynamically positioned to capture maximum energy from ocean currents. The optimization process accounts for turbine wake interactions, which can reduce efficiency if not properly managed. A Particle Swarm Optimization (PSO) algorithm is used to determine the turbine layout that maximizes the farm's average power output within the constrained domain. By integrating a wake model into the optimization loop, the framework significantly improves the farm's average power output, yielding power gains of 41–63% across arrays of 9, 16, and 25 turbines.

MHKDR Highlights

The Marine Hydrokinetic Data Repository (MHKDR) is the repository for all data collected using funds from the U.S. DOE's WPTO, including results from tank tests and open sea trials.

TEAMER: Cook Inlet Tidal Survey at Hilcorp Platforms – Duvoy and Loeffler 2025

Acoustic Doppler Current Profiler (ADCP) ebb and flow tidal measurements were collected to characterize tidal hydrodynamics in the vicinity of offshore platform structures. Observations include both stationary bottom-mounted deployments and vessel-based transects, enabling resolution of flow variability across tidal cycles and spatial gradients. Upward-looking ADCP instruments recorded time series of three-

dimensional velocity profiles, pressure, and instrument orientation, which were subsequently processed into Earth-referenced velocity components and tidal elevation estimates. Complementary transect surveys captured depth-averaged flow structure and hydrographic parameters along repeated cross-sections.

Tank Evaluation of Two Acoustic Cameras to Inform Fish Collision Risk Monitoring Capabilities – Staines and Cotter 2025

This dataset contains acoustic camera data collected in the engineering tank at the Jere A. Chase Ocean Engineering Laboratory at the University of New Hampshire in October 2025. Data were collected with two acoustic cameras: a Sound Metrics Corporation ARIS 3000 (ARIS) and a Tritech Gemini 1200ikd (Gemini). Data was collected using the manufacturer-provided software for both acoustic cameras (ARIScope version 2.10.5.3840 for the ARIS and Genesis version 1.10.5.0 for the Gemini) and extracted for analysis in MATLAB using the manufacturer provided software development kits. This dataset includes the raw data recorded by the acoustic camera software and MATLAB .mat files containing the extracted pings for each target position.

TEAMER: Numerical Modeling of the Pitching Inertial Pump (PIP) Wave Energy Capture Device – Wynn et al. 2026

This project focused on further development of a Numerical Model of the iProTech Pitching Inertial Pump (PIP) wave energy converter (WEC) using the MATLAB/Simulink tool, WEC-Sim. The process involved parameterizing key design variables, running time-domain simulations, and performing sensitivity analyses to determine their impact on power output. The workflow, designed for the PIP device, is generalized and can be extended to optimize other WECs that can be simulated in WEC-Sim. This work establishes a foundation for future time-domain-based WEC design optimizations.

Marine Energy Software Updates

Marine Energy Software is a collection of commercial and open-source software relevant to marine energy development, including software for simulating devices, and processing and analyzing data.

SAM v2025.4.16 Revision 2, SSC 306 Release

The System Advisory Model (SAM) is a free techno-economic desktop application developed by the National Laboratory of the Rockies (NLR) for the analysis of energy technologies, including marine energy wave and tidal systems as well as battery storage. Download the latest version SAM v2025.4.16 Revision 2, SSC 306!

BEMRosetta v2026 May Release

BEMRosetta allows users to load Boundary Element Method (BEM) hydrodynamic coefficients from one format and save them in another. In addition, it allows users to compare the results obtained between programs, the results between similar geometries and the same geometry with different discretization levels. BEMRosetta allows users to view and visually compare the meshes from different BEM programs, like WAMIT, HAMS, Nemoh, Capytaine, and others. BEMRosetta v2026 May features improved case generation for Nemoh, Capytaine, HydroStar and Wamit and many bug fixes.

Welcome to Marine Energy Software: WEC-Grid

WEC-Grid is an open-source Python library developed in partnership with Pacific Northwest National Laboratory and the University of Alaska Fairbanks to simulate the integration of Wave Energy Converters (WECs) and Current Energy Converters (CECs) into renowned power grid simulators like PSS®E & PyPSA. Integration into power grids faces a critical modeling challenge: current power system tools (such as PSS®E and PyPSA) and marine hydrodynamic simulators (such as WEC-Sim) operate independently. This separation hampers collaboration between marine energy and power system communities. WEC-Grid bridges this gap by providing a unified modeling approach that accurately represents interactions between hydrodynamic behaviors and electrical power systems. The framework lowers technical barriers, supports reproducible workflows, and fosters cross-domain collaboration. Check out WEC-Grid today!

News & Press Releases

EuropeWave's First Deployment: IDOM Makes a Splash with MARMOK-A-5 – EuropeWave

The MARMOK Atlantic project, one of three cutting-edge wave energy projects in the final phase of the EuropeWave Pre-Commercial Procurement (PCP) programme, successfully deployed its prototype wave energy converter recently at the Biscay Marine Energy Platform (BiMEP) test site, off the coast of Bilbao. IDOM Consulting, Engineering, Architecture S.A.U recently announced the successful deployment of its modified MARMOK-A-5 device, a prototype floating wave energy converter (WEC) designed to harness sustainable renewable energy from ocean waves. The device will feature a newly commissioned power take-off (PTO) system developed by IDOM, incorporating all the experience and lessons learned from previous testing campaigns. The MARMOK-A-5 is the first WEC to connect electrically to the grid through the HarshLab buoy deployed at the BiMEP test site.

Equinox Ocean Turbines advances towards commercialisation with open-water testing of Mobula® 5 prototype – Equinox Ocean Turbines

Backed by InnoEnergy, Equinox Ocean Turbines (EQOT) is taking a significant step towards the commercialization of ocean current energy with the upcoming open-water testing of its 1:10 scale prototype, Mobula® 5. The milestone marks a key validation phase of the company's technology and supports its current round. Construction of the Mobula® 5 prototype is currently underway, with open-water testing scheduled for the end of June 2026. The test represents a proof-of-principle demonstration under real ocean conditions and is expected to achieve a Technology Readiness Level (TRL) of 6. With its technology, EQOT aims to unlock a largely untapped energy source: continuous ocean currents. Unlike intermittent renewables, the company's solution is designed to deliver reliable baseload power, with a cost structure competitive with offshore wind.

Wavepiston files permits for Gran Canaria wave energy pilot, signs MoU in Iceland – Offshore Energy

Danish wave energy firm Wavepiston and its Spain-headquartered partner Bluenewables have submitted all permitting documentation for a site in Gran Canaria where a pilot wave energy farm is planned to be developed. Wavepiston describes the submission of permitting documentation for the selected site on Gran Canaria's northern coast as another key milestone in its commercial wave energy development. Furthermore, the company is continuing talks with the local government to progress toward the commercial project. As for other regions, the Danish company has signed a memorandum of understanding (MoU) with Iceland-based Haf-Afl to explore the development of commercial wave energy projects, under which the partners will assess how wave energy can complement Iceland's energy mix with scalable, sustainable solutions.

TEAMER Network Director Announces RFTS 17 Technical Support Recipients – TEAMER

On May 5, 2026, the U.S. Testing Expertise and Access to Marine Energy Research (TEAMER) program approved 33 projects through its seventeenth Request for Technical Support (RFTS), reflecting a total of over $4.7 million. These Technical Support Recipients (TSRs) will receive support for testing expertise and access to numerical modeling, laboratory or bench testing, tank/flume testing, expertise, and commercialization within the growing TEAMER Facility Network. Selected applicants, along with their supporting Facility, will now submit their completed Test Plans, a requirement before assistance activities can commence. These numbers represent records for a round in terms of applications received, projects approved, and support amount.

Panthalassa Raises $140 Million to Power AI at Sea – Panthalassa

Panthalassa, a renewable energy and ocean technology company, recently announced $140 million in Series B financing led by Peter Thiel, with participation from many new investors. The funding will complete the company's pilot manufacturing facility near

Portland, Oregon, and accelerate deployment of its Ocean-3 series of nodes, which will perform AI inference computing at sea using power generated from ocean waves. Panthalassa's nodes are autonomous, floating energy systems that are mass-produced from plate steel in coastal factories. They operate in the distant ocean, where they generate clean electricity around the clock. Rather than transmitting energy back to terrestrial grids, Panthalassa uses it directly onboard to power AI chips, sending inference tokens to land by satellite.