PRIMRE BLAST

17 April 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

Upcoming Marine Energy Career Panel

Pacific Northwest National Laboratory (PNNL), National Laboratory of the Rockies (NLR), and Sandia National Laboratories (Sandia) are hosting an informational Marine Energy Career Panel on 23 April 2026 at 2:00pm PDT (9:00pm UTC). 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. Register here.

Water Power Student Questionnaire

In partnership with the U.S. DOE's Hydropower and Hydrokinetics Office (H2O), NLR and the Hydropower Foundation are gathering student insights to better understand student awareness and perceptions of water power. The results of the questionnaire will be used to help improve educational materials and publicly available information on hydropower and marine energy. Submit your responses by 24 April 2026.

MECC Applications Open

The U.S. DOE's H2O and NLR have opened applications for the 2027 Marine Energy Collegiate Competition (MECC), which challenges multidisciplinary teams of undergraduate and graduate students to offer unique solutions to marine energy challenges. Student teams selected in the 2027 application process will have 8–10 months to develop their concepts for presentation at the final event planned in May 2027. Apply by 1 May 2026.

SCGSR Applications Open

The U.S. DOE Office of Science Graduate Student Research (SCGSR) program is accepting applications for its 2026 solicitation. The SCGSR program provides supplemental funds for U.S. graduate awardees to conduct part of their PhD thesis research at a host DOE laboratory/facility 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.

FERN Launch

The Fundy Energy Research Network (FERN) is a newly launched collaborative hub dedicated to advancing the development of tidal energy in the Bay of Fundy. Hosted by the Acadia Tidal Energy Institute, FERN brings together academics, researchers, industry leaders, government, and communities to support interdisciplinary research. Register for free membership here.

Calls for Abstracts & Proposals

The American Society of Mechanical Engineers (ASME) is inviting submissions to a special session, “Design and Dynamics for the Blue Economy”, at the International Design Engineering Technical Conferences & Computers and Information in Engineering Conference (IDETC-CIE 2026). Submit presentation abstracts by 20 April 2026. For questions, email Prof. Maha Haji. IDETC-CIE will take place on 23–26 August 2026 in Houston, Texas, USA.

The Call for Abstracts for OCEANS 2026 Monterey is open through 20 April 2026. The conference will take place on 21–24 September 2026 in Monterey, California, USA.

The Call for Abstracts for the International Conference on Ocean Energy (ICOE) / Ocean Energy Europe (OEE) 2026 has been extended until 24 April 2026. ICOE/OEE will take place on 5–7 October 2026 in The Hague, The Netherlands.

The Call for Abstracts for the 2026 University Marine Energy Research Community (UMERC) Annual Conference and Marine Energy Technology Symposium (METS) is now open through

30 April 2026. UMERC/METS 2026 will take place on 4–6 August 2026, at Stevens Institute of Technology in Hoboken, New Jersey, USA.

The Society for Underwater Technology's (SUT) Offshore Site Investigation and Geotechnics (OSIG) Committee has opened the Call for Abstracts for the 10th International SUT OSIG Conference on Geophysics, Geoscience & Geotechnics for Energy and Resource Resilience until 30 April 2026. The conference will take place on 14–16 September 2027 in London, England.

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 Research Infrastructure Services for Renewable Energy (RISEnergy) project has opened the 4th RISEnergy Transnational Access Call, which provides free access to testing facilities across Europe for researchers from academia and industry working across the target areas of biofuels, solar power, storage, hydrogen, integrated grids, advanced materials, ocean energy, offshore wind, and photovoltaics, including cross-cutting projects. Apply by 26 April 2026.

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.

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 hiring an Undergraduate Hydrodynamic Energy Systems Intern and a Graduate Hydrodynamic Energy Systems Intern. The year-round interns will contribute to the development of marine energy software and wave energy converter modeling tools, and validate simulations and modeling software with high fidelity datasets, among other tasks.

Glosten, a naval architecture and marine engineering firm, is offering an Ocean Engineering & Analysis Internship to support ongoing projects. Opportunities may include climatology, environmental loads analysis, hydrodynamic analysis, seakeeping, mooring analysis, fleet planning & logistics, risk assessment, and other tasks as needed.

Ocean Renewable Power Company (ORPC) is looking for an Operations and Communications Coordinator to serve as the backbone of its Sherbrooke (Québec, Canada) team and bridge the gap between its Canadian operations, US-based team and partners, ensuring administrative, regulatory, and communication engines run seamlessly.

PNNL is seeking a Data Scientist - Field Robotics and AI to help continue to execute and grow its burgeoning portfolio in field robotics, sensing, and AI. This role seeks to add an experienced researcher to the existing robotics, software, and AI team within Coastal Sciences. Appy by 21 April 2026.

The University of Plymouth is offering up to 12 funded doctoral studentships as part of its Doctoral Landscape Award with the EPSRC (Engineering, Physical Sciences Research Council). One studentship will focus on developing an origami-inspired wave energy converter through Dielectric Fluid Generator. Appy by 24 April 2026.

Oregon State University is seeking a Power & Data Systems Manager to assist the PacWave team in establishing the facility as a leading global test facility, which will provide the marine energy sector with the opportunity to test and conduct research, development, demonstration, and deployment activities for wave energy systems and other technologies. Appy by 27 April 2026.

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.

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

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 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 Short Courses & Masterclasses

Aalborg University is offering a PhD-level Course on Numerical and Experimental Modelling and Control of Wave Energy Converters from 11–22 May 2026 in Aalborg, Denmark. This course is designed to provide researchers entering the wave energy sector with a comprehensive introduction to the fundamental concepts required to analyze various types of structures. Apply by 20 April 2026.

The Southeast National Marine Renewable Energy Center at Florida Atlantic University is offering a Marine Energy Short Course on 10–14 August 2026 in Boca Raton, Florida, USA. This short course will introduce energy, energy conversion, and renewable energies; followed by two days focused on current energy production; a day on wave energy conversion; and a day on ocean thermal energy conversion (OTEC). Apply by 30 April 2026.

The Supergen Offshore Renewable Energy (ORE) Hub is offering a series of Masterclasses for professionals and early career researchers to deepen their expertise, including:

- Virtual Prototyping of Offshore Renewable Energy Technologies on 29–30 April 2026 at the National Decommissioning Centre in Newburgh, Scotland
- Advanced Experimental Fluid Mechanics for Offshore Renewable Energy on 13 May 2026 at the University of Plymouth in Plymouth, England
- Environmental Contours & Extreme Value Analysis on 14–15 May 2026 at the University of Exeter in Exeter, England
- Offshore Geotechnics on 18–19 May 2026 at the University of Southampton, in Southampton, England.

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 Forums

Orbital Marine Power is hosting an Orbital and Eauclaire Tidal Energy Supply Chain Forum on 11 May 2026 in Halifax, Nova Scotia, Canada. This event will provide an overview of the project, outline expected supply chain opportunities, and introduce the process that will be used to identify potential suppliers.

Fundy Ocean Research Centre for Energy (FORCE) is hosting a Public Update on 29 April 2026 in Parrsboro, Nova Scotia, Canada. Join to meet the team and hear about current work, research, and what's ahead for tidal energy in the Bay of Fundy.

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.

Arctic deployment of a fully integrated self-powered drifting buoy harvesting wave energy via a triboelectric nanogenerator – Lu et al. 2026

> Extensive, cost-effective in situ monitoring of the rapidly changing yet poorly sampled Arctic Ocean is essential for advancing Arctic research. Self-powered drifting buoys that harvest ocean wave energy offer a promising path toward long-term observations in this remote, harsh environment, but prior designs have not been optimized for real-world wave conditions or validated in the Arctic. We report a self-powered drifting buoy that integrates a pendulum-driven triboelectric nanogenerator (TENG) with a mechanical motion rectifier, a high-gear-ratio transmission, and power management circuits. Through coupled buoy–pendulum dynamic simulations and laboratory testing using a motion simulator, we identify an optimal pendulum mass of 1.6 kg (17.6 % of total buoy mass) that maximizes energy output while maintaining buoy stability.

Wave focusing over tidal turbine wakes – Draycott et al. 2026

> Tidal stream turbines operate in combined wave–current conditions and the downstream wakes that develop due to momentum extraction can modify wave conditions through Doppler shift and refraction. We study this using a wave-ray tracing approach with an effective depth-integrated current representing idealised wakes at rated operation. Four lateral layouts are examined for full-scale turbines (radius R = 9 m, D = 18 m) in 4R

water depth with a typical freestream velocity U0 = 2.5 m/s . We simulate approximately 2500 regular wave cases, spanning periods 4–16 s and a range of relative headings to assess wave amplification fields (averaged over R X R windows), before creating weighted averages representing irregular and directionally spread wave fields. Peak amplification for regular waves reaches > $3A_0$ (with A_0 the incident wave amplitude) for near-opposing incidence and around $2.5A_0$ for near-following conditions.

Cotemporal assessment of wind, wave, and current resources for ocean renewable energy device design and testing – Lou and Robertson 2026

Ocean renewable energy, including offshore wind, wave, and ocean current energy, presents a viable approach to producing renewable power, reducing greenhouse gas emissions, and mitigating climate change. Whilst inherently interconnected, much of the published work focuses on individual metocean environmental assessments. These valuable analyses were insufficient for robust ocean energy system design. This study proposes a methodology to examine the cotemporal characteristics of wave, wind, and current in an open-ocean environment. Based on a 25-year buoy observation dataset collected at a representative open ocean location off the coast of Oregon, USA, the cotemporal distributions of wind-wave and current-wave conditions are investigated over sea state histogram.

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.

DTOcean v4.0 Release

DTOcean is an open-source software package that automates the design of an array of ocean energy converters (OECs). Automated design helps catch errors early, reduce financial risk and encourage innovation in array design and the supply chain. The DTOcean v4 project is updating the original DTOcean code from Python 2 to Python 3, including updates to the full levelized cost of electricity (LCOE) calculation, easier database management, and easier installation from PyPI. Feature transition is continuing, and you can follow the progress on the project's status board.

OpenFAST v5.0.0 Release

OpenFAST is an open-source software package developed by NLR. It is a multi-physics, multi-fidelity tool for simulating the coupled dynamic response of wind and marine energy turbines. MoorDyn is a popular module from OpenFAST used across the marine energy industry to numerically model mooring line dynamics using lumped mass discretization. OpenFAST v5.0.0 features a major update to the glue code and introduces an implicit tight-coupling solver for improved speed and stability as well as

enhancements to the *SubDyn*, *HydroDyn*, and *ExtPtfm* modules. *OpenFAST* now supports modeling multiple rotors attached to a single support structure. Check out the new *SoilDyn* module for soil-structure interactions and new features for MHK turbines like wave-current coupling, added mass effects, and fluid-inertia loads.

MoorDyn v2.6.0 Release

MoorDyn is an open-source software package developed by NLR. It is used across the marine energy industry to numerically model mooring line and umbilical cable dynamics using a lumped mass discretization. MoorDyn is an adaptable software written in Fortran and C++, giving it the capability to couple with OpenFAST and WEC-Sim. MoorDyn v2.6.0 introduces complementary updates to v2.5.0 that address issues encountered when building wheels across different operating systems and APIs. The VTK library was replaced with lean-vtk to resolve these compatibility issues while also removing a large external dependency. The new version can now optionally disable the CMD windows on MoorDyn v1. Additional minor changes were implemented to support this transition.

Telesto Highlights

Telesto provides information and resources about the development life cycle of marine energy, as well as information on lessons learned, metrics, economics, standards, and compliance.

Marine Energy Project Planning

Two distinct groups may have an interest in developing a new marine energy source from the ocean: a marine energy device developer seeking opportunities to develop a project consisting of their technology; or a community seeking marine energy to fit their needs. Many of the planning steps are similar between the two, but some differ. The Project Planning page on Telesto provides insight and links to resources that will help with each step in the planning process for both developers and communities. This may involve identifying a resource (e.g., wave, tidal, riverine, OTEC), testing a device of interest, getting an understanding of the regulatory requirements, engaging with stakeholders, looking for funding opportunities, and understanding associated standards and certifications.

News & Press Releases

Swedish firm looking to deploy its hybrid ocean energy platform in Costa Rica – Offshore Energy

Sweden-based NoviOcean is exploring the options for the deployment of its hybrid offshore renewable energy platform, which combines wave, wind, and solar energy technologies, in Costa Rica. NoviOcean has signed a memorandum of understanding (MoU) with MIR Green Energy to explore the deployment of the Medi Wave 850H platform along the Pacific coast of Costa Rica, which is said to offer consistent wave

energy, high solar irradiation, and localized wind corridors, particularly in the Papagayo region. Under the agreement, the partners will explore the identification of suitable pilot sites, feasibility assessments and environmental considerations, engagement with Costa Rican authorities and stakeholders, development of market entry strategies and financing structures, as well as potential pilot and demonstration projects.

The rise and fall —and rise again — of tidal turbines – Canada's National Observer

Since then, solar has become the cheapest power on the planet — in fact, the cheapest power in human history — with wind close behind. Nuclear has been bogged down by new regulations and rising capital costs, while geothermal has produced a lot of cheap power for the very few countries with the right geology. All rivers worth damming have been dammed, and the ecological consequences have been sobering. But what's happened with tidal? Anchor a few turbines to the seabed, and you can harness tides the same way you harness wind, but unlike wind — whose output fluctuates wildly with the weather — tides are predictable down to the minute, and therefore, down to the megawatt. So where are those reliable megawatts?

Construction continues for French full-scale wave energy demonstrator – Offshore Energy

Wave-Op, a joint venture between the Legendre Group and Geps Techno dedicated to innovation in coastal and port infrastructure, is progressing the construction of its first full-scale demonstrator for what it describes as a unique wave-powered system, combining coastal protection and renewable electricity generation in Boulogne-sur-Mer, France. The company expects to step up the port infrastructure decarbonization game with this project. The approval for the construction of the Dike Wave Energy (Dikwe) project's full-scale demonstrator in the municipalities of Boulogne-sur-Mer and Le Portel came in March 2025. With the support of the Hauts-de-France Region and ADEME, it is expected to serve as a basis for experimentation and in-depth research on wave energy technologies, environmental monitoring, and the development of new industrial applications.

COAST announces successful clean energy Innovation Challenge participants developing solutions for priority Canadian Coast Guard needs – Centre for Ocean Applied Sustainable Technologies (COAST)

Four B.C.-based companies are the successful participants of an Innovation Challenge to be delivered through Innovate BC's Integrated Marketplace and enabled by the BC Marine Energy and Decarbonization Hub, a joint initiative of COAST and the University of Victoria. This Innovation Challenge is designed to help address the Canadian Coast Guard's goal to decarbonize land-based operations in remote coastal areas of British Columbia. It targets new innovations that can displace diesel at light stations, utilizing renewable energy sources (including marine renewables), as well as advanced energy management and storage solutions. The systems must be rapidly deployable, modular, and scalable to meet the Coast Guard's operational constraints at remote, often hard-to-access sites.

Ocean Power Technologies Secures Order for Fully Integrated WAM-V for an Underwater Research Customer in the Nordics – Ocean Power Technologies

Ocean Power Technologies, Inc. (OPT), recently announced it has secured a contract from a new Nordics based underwater research customer for a fully integrated Wave Adaptive Modular Vehicle (WAM-V) for immediate delivery. This contract expands the Company's previously announced expansion into certain regions in the Nordics, working with end customers and governments. The vehicle will be assembled immediately and shipped to the customer. OPT provides intelligent maritime solutions and services that enable safer, cleaner, and more productive ocean operations for the defense and security, oil and gas, science and research, and offshore wind markets, including Merrows™, which provides AI-capable seamless integration of Maritime Domain Awareness Systems across platforms.