PRIMRE BLAST

3 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

PRIMRE Videos

View the PRIMRE YouTube Playlist to learn more about PRIMRE, each of the knowledge hubs, and how to contribute your marine energy data, documents, project information, and more.

MECC Applications Open

The U.S. Department of Energy's (DOE) Hydropower and Hydrokinetic Office (H2O) and the National Laboratory of the Rockies (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. Apply by 1 May 2026.

SCGSR Applications Open

The U.S. DOE Office of Science Graduate Student Research (SCGSR) program, which supports PhD students while working at DOE National Laboratories, is accepting applications for its 2026 solicitation. An SCGSR application assistance workshop will be held on 9 April 2026 from 2:00-4:30pm EDT (7:00-9:30pm UTC). Apply by 6 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

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

Baldwin Wallace University is hiring a Marine Energy Research & Outreach Fellow to gain hands-on experience in marine energy and water management working directly with community stakeholders and partner organizations including the Cleveland Water Alliance and the Port of Cleveland.

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.

Porpoise Power is seeking a Lead Electrical Systems Engineer to lead the design and delivery of the power-generation electrical architecture that converts fin-driven mechanical motion into electricity and work across power conversion, protection, cabling, thermal management and electrical integration of its full-scale tidal system.

Pacific Northwest National Laboratory (PNNL) is hiring an Undergraduate Marine/Wind Energy Database Intern to support data entry, tag review, and QA/QC for documents, events, metadata, tools, and educational resources on Tethys. The intern will also help compile project information, environmental research, and related datasets for marine energy projects and offshore wind farms. Apply by 9 April 2026.

European Marine Energy Centre (EMEC) is hiring a Project Portfolio Manager to manage the delivery of decarbonisation projects underneath the Islands Centre for Net Zero (ICNZ) program and a Business Development Officer (Graduate) to identify, develop, and secure opportunities for EMEC to grow its portfolio of projects. Apply by 17 April 2026.

Ocean Energy Europe is hiring a Policy Officer to work alongside colleagues committed to push for the best possible framework to develop ocean energy at the European Union and national levels. Apply by 17 April 2026.

PNNL is also 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.

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.

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

TEAMER is hosting a webinar, "TEAMER Commercialization Facility Showcase", on 8 April 2026 from 11:00am-12:30pm PDT (6:00-7:30pm UTC). During the webinar, TEAMER facilities offering Commercialization support capabilities will introduce the types of support they can offer and the experts who carry out the work. The facilities presenting are NLR, VentureWell, Factor, OpenSeas Technology Innovation Hub, Yet2, and Environmental Science Associates.

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.

- "A HERO WEC Journey: Energizing Microgrids With Wave Energy", will take place on 13 April 2026 at 12:00pm MDT (6:00pm UTC) and cover practical considerations for deploying wave energy devices and lessons learned from real-world Hydraulic and Electric Reverse Osmosis Wave Energy Converter (HERO WEC) deployments.
- "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 & Trainings

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.

VentureWell is accepting proposals for individual innovators or teams to enter their Ocean Enterprise Accelerator program (Stage 0), which is designed for innovators curious about beginning their blue innovation journey but not sure where to start; for those who are new to the world of commercialization and venture development; or for those looking to apply their technology in the blue economy industry. Three half-day virtual workshops will take place on 19 and 21 May, and 9 June 2026. Apply by 7 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.

Upcoming Forums & Workshops

Orbital Marine Power is hosting an Orbital and Eauclaire Tidal Energy Supply Chain Forum on 11 May 2026 in Halifax, Nova Scotia. 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.

TEAMER is hosting a Deck Ops Workshop on 7-9 July 2026 at the Coastal Studies Institute in Wanchese, North Carolina, USA. This extended, in-person workshop will allow for deep participant engagement, integration of hands-on deployment scenarios, and increased access to experienced marine energy professionals, with emphasis on design-for-deployment, resiliency, and cross-discipline collaboration. Apply by 3 April 2026.

Upcoming Conferences

Pacific Ocean Energy Trust (POET) is hosting the 2026 Ocean Renewable Energy Conference (OREC) on 18-21 May 2026 in Portland, Oregon, USA. OREC will take place in partnership with the 2026 MECC. Early bird registration closes 7 April 2026.

The OCEANS 2026 Sanya Conference will take place on 25-28 May 2026 in Sanya, China. Early bird registration closes 20 April 2026.

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

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.

Combined effects of horizontal and vertical resolution on reliable turbulence prediction at tidal energy sites: A systematic study in the Salish Sea, WA – Deb et al. 2026

> Predicting turbulence characteristics with coastal ocean models is essential for tidal energy converter deployment. While large eddy simulation provides a detailed representation of turbulence, computational limitations limit its use to smaller domains. We systematically evaluate whether coastal models can provide reliable turbulence prediction through progressive refinement of 3D representation. Four configurations (Levels 1-4) using terrain-following coordinates isolated impacts of horizontal resolution, vertical resolution, and layer distribution, validated against field measurements from the Salish Sea, WA. Tidal current predictions remained consistent across configurations, but turbulence properties proved sensitive to resolution.

Electromagnetic Analysis of Double-Rotor Direct-Drive Permanent Magnet Generators Under Eccentricity Faults – Salinas et al. 2026

> Permanent Magnet Synchronous Generators (PMSGs) have acquired a pivotal role in recent years, owing to their high-power density, high efficiency, and ability to operate in direct-drive configurations. Despite these advantages, such machines are susceptible to mechanical faults, particularly airgap eccentricity, with axial flux topologies being more vulnerable due to their high ratio of axial to radial length. Given the rapidly increasing

deployment rates of these generators, this paper focuses on the electromagnetic analysis of a coreless axial flux dual-rotor direct-drive PMSG, with the analysis focusing on eccentricity faults. Static (SE) and dynamic (DE) eccentricities are investigated under a specific load condition using 3D finite element analysis (FEA) models.

Thermodynamic performance and feasibility assessment of a micro OTEC unit for underwater charging applications – Fan et al. 2026

This study constructed an experimental platform of a micro OTEC unit and investigates it power generation performance under the variation in working-fluid pump frequency, turbine frequency, warm-water flow rate, and cold-water flow rate. In addition, a self-consumed electricity model for the micro OTEC unit was developed, and data-driven predictive analysis was conducted to estimate the net power output and net thermal efficiency, thereby evaluating the potential of the developed unit for underwater power supply applications. The results indicate that the power generation of the unit is 714.6W, corresponding to a thermal efficiency of 1.86%. The stability of the unit is compromised when there is an excessive adjustment in the working-fluid pump frequency, while adjusting the turbine frequency has minimal effect on unit stability.

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.

Swansea Remote River Energy System – CGEN Engineering and Swansea University

Swansea University has developed a 3 m diameter, 2-bladed axial-flow tidal device built on a floating barge. The system is opensource and was first tested in 2023 (component trials and tow testing) and 2024 (extended moored testing) at META's Warrior Way test site. Masters et al. (2025) discuss these initial tests. Then in 2025, CGEN partnered with Swansea to integrate the turbine with CGEN's fully marinized, lightweight, modular generator system. Testing at the META Warrior Way site followed. This campaign elevated CGEN Engineering's generator TRL from 5 to 7, and demonstrated the generator's manufacturability and transportability.

GMGS Floating OTEC – Guangzhou Marine Geological Survey

The Guangzhou Marine Geological Survey (GMGS) device is a 20 kW ocean thermal energy converter (OTEC). The device is based on a closed Rankine cycle with R134a as the working fluid. See Ou et al. (2026) for more details on the design and construction of the device. The device was tested in the South China Sea during a 10 day period in August 2023. Power was generated for a total of 4 hours and 47 minutes. During the test period, the actual maximum power generation was 16.4 kW, the cumulative power generation was 57.74 kWh.

Weptos WEC – Weptos

> Weptos WEC is a floating WEC. The V-shaped structure absorbs the wave energy through a line of rotors (Salter Ducks), each of which transmits energy to a common axle directly coupled to a rotary generator. The Weptos technology differentiates itself by applying mechanical energy extraction in a two-way rotor movement to limit energy loss. Weptos WEC is designed with an adjustable angle, allowing it to adapt to increase energy extraction over a wider reach in calm waters and ensure high survivability in rough weather conditions. Weptos has entered a commercial phase after 16 years of development, testing, and documentation of its wave energy system.

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: Two Stage Ocean Current Turbine Reduced Order Modeling – Ross et al. 2026

> The Equinox Ocean Current turbine is a new two-stage turbine design, enabling cost effective power generation at low water velocities. The data included in this submission can be used to reproduce the figures provided in the corresponding Post Access Report. The provided script "EquinoxFigures.ipynb" calls the appropriate datasets and generates the figures. Normalized performance, thrust, and blade load data for the Equinox Ocean Turbines two-stage device are given, including for the main and secondary rotors operating in isolation, as well as for the combined rotor. Data from multiple levels of model fidelity are included. Calculated induction factors, inflow plane velocities, and induced velocities are given as well.

Experimental Performance of a Laboratory-Scaled Oscillating Surge Wave Energy Converter – Polagye et al. 2024

> This data is a subset of the data from an experimental campaign to characterize the hydrodynamics and performance of a laboratory-scale oscillating surge wave energy converter (OSWEC). The device was 85 cm wide, 1.4 meters tall, and 14 cm thick and was tested in the Sea Wave Environmental Lab (SWEL) wave tank at the National Laboratory of the Rockies which is 2.5 meters wide with a water depth of 1.3 meters. The device included fifteen pressure sensors on the flap face, two 6-axis load cells at the hinge, an encoder to measure flap position, and a motor to emulate a power take-off (PTO) and absorb power. This data set consists of a single sweep through power take-off damping values with post-processed data from the pressure sensor array, in addition to flap motion, forces, and torques.

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. Included in this submission are all figures from the final report and the model inputs required to generate them. This includes boundary element method (BEM) models, hydrodynamic coefficients, and the WEC-Sim models used for time-domain analyses.

News & Press Releases

Ocean Power Technologies Advances U.S. Homeland Security Contract with Shipment of First PowerBuoy® – Ocean Power Technologies

Ocean Power Technologies, Inc. recently announced the shipment of the first PowerBuoy® system under its previously announced $6.5M contract with the U.S. Department of Homeland Security (DHS). The system will support maritime domain awareness operations for the U.S. Coast Guard. The shipment marks a key milestone in the program and represents the transition from system development and integration into operational deployment. This PowerBuoy® system, together with others under the contract, will be deployed off the coast of California to provide persistent, autonomous offshore surveillance capabilities supporting DHS mission requirements. Integration with Anduril's systems is progressing in parallel.

New deal to unlock full potential of renewable energy in Wales – Welsh Government

The Renewable Energy Sector Deal will be a strategic partnership between Welsh Government and industry, focused on unlocking the full economic potential of Wales' renewable energy future. It coincides with the publication of the latest Energy Generation and Energy Use in Wales report, which shows renewable electricity generation in Wales in 2024 was equivalent to 54% of its electricity consumption. The target is for renewable electricity generation to meet 70% of our consumption by 2030 and 100% by 2035, whilst also delivering at least 1.5 gigawatts of locally owned renewable energy capacity by 2035. The Sector Deal will help deliver on these ambitious targets by accelerating renewable deployment across onshore and offshore wind, solar, marine and hydro.

Eco Wave Power Submits Final Project Completion Report to Shell International Exploration and Production Inc., Successfully Concluding Port of Los Angeles Pilot Program – Eco Wave Power

Eco Wave Power Global recently announced that it has submitted the final project completion report to Shell International Exploration and Production Inc. (Shell), marking

the successful completion of the wave energy pilot objectives under a Pilot Test Agreement entered between the parties in 2024. The submission of the final report represents the completion of all contractual milestones and deliverables under the Pilot Test Agreement signed in 2024 between Eco Wave Power and Shell, concluding a structured development program that progressed from feasibility analysis through engineering design, system installation, operational testing, and final reporting.

Momentum builds for Tidal Lagoon in Swansea – Marine Energy Wales

Plans to deliver a once in a generation tidal lagoon in Swansea Bay have taken a major step forward, following a landmark agreement between Swansea Council and Batri Ltd. The deal will see the former Tir John landfill site transformed into a major new solar farm, creating the clean-energy foundation needed to power a wider programme of renewable energy projects, including the proposed tidal lagoon. The lagoon would harness the power of the tides to generate predictable, renewable electricity, create thousands of skilled jobs and drive significant long-term economic growth for Swansea and the wider region. The development of a new solar farm is the first major step in the ground-breaking initiative and will be delivered in three phases, with planning permission already in place for phase one.

The Tidal Cycle: How Indeximate's Distributed Acoustic Sensing Helped MeyGen Identify And Mitigate Risks To Their Cables – Indeximate

Indeximate uses the rich and versatile data provided by Distributed Acoustic Sensing, or DAS, to help offshore renewable energy providers, regardless of whether they look above or below the waves, answer these questions. In this blog post, Indeximate discusses how two years' of continuous monitoring at the MeyGen tidal array – often referred to as the largest tidal array project in the world – has helped them better understand the risks faced by their cables in the harsh environmental conditions of the Pentland Firth. Specifically, Indeximate discussed how their methods have helped to identify *persistent* risk areas along the cables, inform where *preventative* action could be taken, and then *confirm* whether the action was successful.