

13 June 2025

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

Announcements
Upcoming Events

<u>Tethys Eng. Documents</u> Projects Highlight MHKDR Update
News & Press Releases

Announcements

Request for Proposals

Battelle Memorial Institute, Management & Operating Contractor of the U.S. Department of Energy's Pacific Northwest National Laboratory, is <u>requesting proposals for a tidal turbine system</u>. Interested parties are invited to submit a proposal by 5 September 2025.

Calls for Abstracts & Papers

Marine Renewables Canada (MRC) opened the <u>Call for Abstracts</u> for the Research & Technical Track at the MRC 2025 Conference & Exhibition through 16 June 2025. <u>MRC 2025</u> will take place 12-14 November 2025 in Halifax, Nova Scotia, Canada.

Marine Technology Society opened the Call for Abstracts for its <u>Fisheries & Benthic Monitoring TechSurge</u> through 20 June 2025. The focused TechSurge will take place on 8-9 October 2025 in Narragansett, Rhode Island (USA) and convene experts to explore advancements in monitoring technologies and practices that support responsible offshore development.

Funding & Testing Opportunities

The U.S. Department of Energy's <u>Energy Technology Innovation Partnership Project (ETIPP)</u>, which helps U.S. coastal, remote, and island communities become more energy resilient, has opened applications for new communities to join. Applications are due 27 June 2025.

The Testing Expertise and Access for Marine Energy Research (TEAMER) program, sponsored by the U.S. Department of Energy and directed by the Pacific Ocean Energy Trust (POET), is accepting Request for Technical Support (RFTS) 17 applications through 3 October 2025 to support marine energy testing and development projects.

University of California San Diego is accepting applications for its <u>StartBlue Ocean Enterprise</u> <u>Accelerator</u> program, which is a four-month program designed to help ocean intelligence startups launch and scale to support the ocean enterprise and grow the blue economy. StartBlue is hosting an <u>information session</u> on 26 June 2025 from 12:00-1:00pm PST (7:00-8:00pm UTC) and applications are due 31 July 2025.

Career Opportunities

Natural Resources Wales is looking for a <u>Marine Energy Lead Advisor</u> to join its Marine & Coastal Policy & Planning team, which leads on the development of, and advice on, strategies, policies, legislation, approaches and guidance, in relation to planning and management of the marine and coastal environment. Applications are due 18 June 2025.

The University of Hawai'i at Manoa, School of Ocean and Earth Science and Technology is seeking an <u>Assistant Professor or Associate Professor in Marine Energy</u>. The position is full-time and is part of the Department of Ocean and Resources Engineering (ORE) and the Hawai'i Natural Energy Institute (HNEI). Application reviews begin 23 June 2025.

Environmental Research Institute at the University of the Highlands and Islands (ERI-UHI) and European Marine Energy Centre (EMEC) are looking for a <u>3-year Knowledge Transfer Partnership (KTP) Associate</u> to develop environmental monitoring technologies, data management, and analysis methods to investigate animal interactions with marine energy devices. Applications are due 23 June 2025.

ERI-UHI is also looking for an Energy Innovation Coordinator to lead their energy industry engagement, knowledge exchange, business development and innovation activities. Applications are due 30 June 2025.

The Fundy Ocean Research Centre for Energy (FORCE) is seeking a <u>Marine Optical and Acoustic Sensing Lead</u> to support the Ocean Sensors Innovation Platform (OSIP) project and be responsible for designing, executing, and refining monitoring programs focused on improving our understanding of potential fish-turbine interactions in the Bay of Fundy, Canada.

Upcoming Events

Upcoming Webinar

The Marine Alliance for Science and Technology for Scotland (MASTS) is hosting an Open Forum Session, "<u>Anthropogenic Energy in the Marine Environment</u>", on 18 June 2025 from 10:00-11:00am BST (9:00-10:00am UTC). The session will include presentations on energy

pollution from offshore wind, energy pollution by ships, and improving tidal energy capture by a partial-width array using Flow Alteration by Introduced Roughness (FLAIR). Register here.

Upcoming Workshop

Supergen ORE (Offshore Renewable Energy) Hub is hosting the "<u>Flexible Funding Brokerage Workshop</u>" in order to share call details and facilitate UK industry-academia collaborations. The workshop will take place on 9 July 2025 from 2:00-3:30pm BST (1:00-2:30pm UTC).

Upcoming Conferences

The University of Bristol is hosting the <u>12th PRIMaRE (Partnership for Research In Marine Renewable Energy) Conference</u> on 2-3 July 2025 in Bristol, England. <u>Register here</u> by 20 June 2025.

The 2025 Ocean Renewable Energy Conference (OREC) and University Marine Energy Research Community (UMERC) Conference will both take place on 12-14 August 2025 at Oregon State University in Corvallis, Oregon, USA.

The University of Liverpool is hosting the <u>11th Congress on Tidal Dynamics and Sedimentology</u> (<u>TIDALITES</u>) on 9-11 September 2025 in Liverpool, England.

New Documents on Tethys Engineering

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

<u>Performance Prediction of flow induced vibration and energy capture for VIVACE</u> <u>converter improved by magley in ultra-low velocity zones</u> – Yang et al. 2025

Using flow-induced vibration (FIV) for low-velocity ocean current energy generation is an effective approach. Due to the poor vibration performance of oscillators supported by metal springs in ultra-low flow velocity zones, leaving a significant gap in studies in ultra-low flow velocity zones. This study found that replacing metal springs with a maglev system to support the oscillator results in better flow-induced vibration characteristics in low flow velocity zones. It is speculated to perform better in ultra-low flow velocity zone. Therefore, this study employs maglev-supported oscillators to investigate flow-induced vibration in ultra-low flow velocity zones, which holds significant implications for deep-sea power generation research.

Oscillating water column wave energy converter with flexible structured sheet material for enhanced power output – Huang et al. 2025

Flexible wave energy converters (FlexWECs) are increasingly recognized for their potential to improve efficiency, reliability, and survivability in extreme ocean conditions.

This study explores two strategies to enhance FlexWEC performance: customizing material properties and optimizing structural configuration. A structural sheet material with a specific pattern was developed to increase device power output under lower external loading, while membrane pre-stretching was investigated to tune the system's natural frequency and improve dynamic response. The material's mechanical behaviour was characterized through uniaxial tests, and a hyper-elastic YEOH model was applied to describe its nonlinear response.

A modeling study of ocean thermal energy conversion resource and potential environmental effects around Kailua-Kona, Hawaii – Park et al. 2025

Ocean Thermal Energy Conversion (OTEC) offers a promising renewable energy solution using the temperature difference between warm surface seawater and cold deep seawater. Because detailed resource characterization is critical for the optimal design and implementation of OTEC systems, a high-resolution numerical model is employed to better characterize the OTEC resource at Kailua-Kona, Hawaii. The model results reveal distinct patterns and dynamics not captured by existing observations or low-resolution models. These findings highlight the importance of using high-resolution models for fine-scale predictions of thermal gradient variability, ultimately supporting more efficient and sustainable OTEC deployment.

Marine Energy Projects Database Highlight

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

Cal Poly Pier - California Polytechnic State University - San Luis Obispo

The Cal Poly Pier allows users to test equipment from an easily accessible, shore-based facility, without the expense and complications of ship time. The Pier extends 1 km into San Luis Obispo Bay, California (USA), in 12 m/40 ft of water, providing ample depth for deploying and testing a range of equipment. There is also a 100-gallon/min flow through seawater system for aquaculture and organismal studies. It is a secured facility, with restricted access and loading capacities sufficient to transport large equipment out onto the Pier.

ATIR – Magallanes Renovables

ATIR is a floating tidal energy device made by Magallanes Renovables. The device has three main parts: the (1) powertrain submerged within the water column with 2 attached turbines that capture energy from the tides, (2) a hollow mast the connects and enables full access of the powertrain from the (3) main body shaped like a ship floating on the surface which houses electrical and computing systems, allowing for stable energy transmission onto the grid.

GKinetic 12 kW Tidal Turbine – **GKinetic Energy**

The GKinetic 12 kW tidal turbine concept involves two cross-flow turbines placed on either side of a buoyant vessel with an airfoil shape (the foil's leading edge is perpendicular to seafloor and faces the incoming water flow). This unique shape of the vessel increases the speed of water into the turbines. The combination of the accelerated flow along with a patented blade pitch control system results in higher power outputs. There are no major civil works required, the device can simply be anchored in the water flow. Grant funding from the Sustainable Energy Authority of Ireland (SEAI) supported the deployment of the GKinetic turbine at the Limerick Docks for two sets of tests.

MHKDR Update

The Marine Hydrokinetic Data Repository (<u>MHKDR</u>) 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.

<u>TigerRAY Drifting Tests and Wave Data - Lake Washington and Puget Sound, February 2023 - Rusch et al. 2025</u>

This dataset contains measurements from drifting deployments of the TigerRAY, a two-body wave energy converter, and four SWIFT buoys on Lake Washington and Puget Sound during February 2023. Tests were conducted under varying wave conditions, including natural waves, calm conditions with artificial boat wakes, and periods of power take-off (PTO) engagement and freewheeling.

<u>Underwater Target Detection Software Demonstration on the RivGen Turbine</u> – Joslin et al. 2024

This repository includes data, object detection models, and processing scripts necessary to evaluate the accuracy of the object detection models created for the underwater target detection software demonstration on the RivGen turbine project and to reproduce the performance metrics (precision, recall, mAP50, mAP50-95) presented in the report.

TEAMER: Advanced Wave-to-Wire OWC model in WEC-Sim – Peñalba et al. 2024

This project aims at developing a wave-to-wire (w2w) numerical model for floating oscillating water column (OWC) devices based upon the Wave Energy Converter SIMulator (WEC-Sim) platform. To that end, nonlinear hydrodynamics, considering viscous and nonlinear Froude-Krylov effects were implemented, and new capabilities were articulated into the WEC-Sim platform, incorporating thermos-aerodynamic effects for the air-turbine.

News & Press Releases

<u>Seaturns accelerates its large-scale development with Fondation OPEN-C</u> – Fondation OPEN-C

Seaturns, a startup based in Bordeaux, France and Fondation OPEN-C have signed an agreement for the deployment, in summer 2025, of a full-scale wave energy converter demonstrator at the SEM-REV offshore test site, located off the coast of Le Croisic. This partnership marks a key milestone in the finalization of Seaturns' technology and highlights the crucial role played by Fondation OPEN-C in supporting emerging technologies in the Marine Renewable Energy (MRE) sector. Less than six months after completing 1:4 scale tests—conducted between October 2023 and February 2025 at the Sainte-Anne du Portzic site (Ifremer)—Seaturns is already ready to move to full-scale. This swift progress is due to the simple and robust design of its wave energy system, which is based on the oscillation of a floating device coupled with pneumatic wave energy conversion.

<u>Power Advisory Kicks Off Procurement Process for Tidal Energy in Nova Scotia.</u> – Power Advisory

Power Advisory has initiated the procurement process for tidal stream energy projects in Nova Scotia, Canada in the Bay of Fundy's Minas Passage, which offers one of the largest tidal energy resources in the world. In April of this year, Power Advisory was appointed as the Procurement Administrator for this procurement process by the Province of Nova Scotia. As Procurement Administrator, Power Advisory will be responsible for ensuring that the procurement is fair, transparent and competitive. The province will consider projects with nameplate capacity of between 5 megawatts ("MW") and 8 MW. Projects can be located in Berths 'B' or 'E', or both berths, within the Fundy Ocean Research Centre for Energy ("FORCE") marine renewable-electricity area. The total aggregate capacity of the license awards for both berths will not exceed 13 MW.

Eco Wave Power Prepares for First-Ever U.S. Installation as LA Wave Energy Project Gains Momentum – Eco Wave Power

Eco Wave Power recently announced a significant milestone in the development of its first U.S. pilot project, located at the Port of Los Angeles. Amid rapid and meaningful progress, Inna Braverman, Founder and CEO of Eco Wave Power, and Ran Atias, VP of Engineering, conducted a site visit to All-Ways Metal, a woman-owned metal fabrication company based in California and the official manufacturing partner for Eco Wave Power's U.S. pilot. During the visit, the team confirmed the production of three of the Eco Wave Power floaters, which will next enter the painting, and full assembly phase in preparation for installation. Eco Wave Power also confirmed that all floaters for the Port of LA pilot are expected to be completed by the end of June 2025, keeping the project on track and on schedule, with installation intended to take place in July 2025.

<u>Minesto's tidal power plant Dragon 12 in operation reaching key production performance milestone</u> – <u>Minesto</u>

Minesto recently announced that its Dragon 12 tidal energy system (Luna), installed in Vestmannasund, Faroe Islands, has met a major production performance milestone: the longer tether enables a 25% increase of power performance. This strengthens the company's path toward commercial-scale deployment of its unique tidal kite technology. Following the recent upgrade and installation of the Dragon 12 (Luna) mid-May, Minesto concludes that the system has met performance expectations as simulations predict. Most significantly, based on a 10 meter longer tether, the power performance increase is around 25% relative earlier testing. This is expected from computer simulation predictions. These results further validate production volumes used in Minesto's business cases for commercial buildout in the Faroe Islands.

<u>DSSMARPLUS</u>, an operational platform for test support in <u>BiMEP</u> and <u>Mutriku</u> – Biscay Marine Energy Platform (BiMEP)

The new DSSMARPLUS digital platform is already operational in the BiMEP and Mutriku test areas, offering environmental predictions, download of certified reports and advanced technical support for marine testing planning and implementation. The DSSMARPLUS web platform is an innovative tool for supporting marine technologies testing that is already in operation with real-time data in both the BiMEP offshore area (Armintza) and the Mutriku power plant. This development has been carried out by the Institute of Environmental Hydraulics of the University of Cantabria (IHCantabria) in collaboration with BiMEP. The platform has been created within the framework of the MAR+ project and represents a key advance for the promotion of marine renewable energies by integrating spectral forecasting models, real-time operational systems and access to certified technical information.

<u>Tidal Technologies launches major procurement process</u> – Ocean Energy Europe

Tidal Technologies Limited (TTL) has launched a major procurement process for its first full-scale tidal energy prototype, marking a key step forward in the UK's energy transition. TTL recently announced the commencement of its procurement process for the equipment supply, manufacture and installation of components for its next-generation offshore tidal stream energy platform (TT2). TT2 aims to drastically reduce the operation and maintenance costs of tidal turbines while improving efficiency in medium-energy tides. This innovative project represents a significant step forward in the UK's renewable energy landscape and offers substantial opportunities for suppliers across the marine, construction, and renewable energy sectors. The TT2 platform features a reinforced concrete Gravity Base Structure (GBS) supporting a steel superstructure and two vertical axis turbines.