



10 January 2025

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 Events](#)

[Tethys Eng. Documents](#)
[Telesto Highlight](#)

[Marine Atlas Update](#)
[News & Press Releases](#)

Announcements

New Marine Energy Projects Database Video

The PRIMRE team has released a new 2-minute [Marine Energy Projects Database Video](#) highlighting the Knowledge Hub's key features and uses. Dive in to learn more!



EnergyTech UP

The U.S. Department of Energy (DOE) Office of Technology Transitions has opened registration for the [EnergyTech University Prize \(EnergyTech UP\)](#), where student teams will compete to identify a promising energy technology, assess its market potential, and create a business plan for

commercialization. Faculty submissions are due 13 January 2025, an informational webinar will take place on 23 January, and student registration for the Explore Phase is due 3 February.

Marine Energy Fellowship

The U.S. DOE's Water Power Technologies Office (WPTO) and the Oak Ridge Institute for Science and Education (ORISE) are accepting applications for the [2025 Marine Energy Fellowship](#), which features one track for graduate students working on marine energy-focused research and a new post-graduate track for recent graduates advancing their careers in marine energy. Applications are due 7 March 2025.

Calls for Abstracts

The [Call for Abstracts & Paper Submissions](#) for the [16th European Wave and Tidal Energy Conference \(EWTEC 2025\)](#) has now opened until 13 January 2025. EWTEC will take place on 7-11 September 2025 in Madeira, Portugal.

The [Call for Abstracts](#) for the [European Geoscience Union \(EGU\) General Assembly 2025](#) is now open through 15 January 2025. The EGU General Assembly 2025 will take place on 27 April–2 May 2025 in Vienna, Austria and online.

The [Call for Abstracts](#) for the [7th International Conference on Ocean Engineering \(ICOE 2025\)](#) is open through 31 January 2025. ICOE 2025 will take place 14-18 September 2025 in Chennai, India.

The Oceanic Network has opened the [Call for Posters](#) for the [International Partnering Forum \(IPF 2025\)](#) through 10 February 2025. IPF will take place from 28 April to 1 May 2025 in Virginia Beach, Virginia, U.S.

Funding & Testing Opportunities

The U.S. DOE has opened new funding to small businesses for innovative clean energy technologies, including water power and wind energy, as part of its [Small Business Innovation Research and Small Business Technology Transfer \(SBIR/STTR\)](#) programs. Letters of intent are due 14 January 2025.

Horizon Europe has opened a Call for Proposal, [Critical technologies for the future ocean energy farms](#). Projects are expected to increase performance of ocean energy technologies with the focus on sustainability, operation, and maintenance; improve knowledge on how to operate ocean energy devices; and reduce levelized cost of interest. Proposals are due 4 February 2025.

The Testing Expertise and Access for Marine Energy Research (TEAMER) program, sponsored by the U.S. DOE and directed by the Pacific Ocean Energy Trust (POET), is accepting [Request for Technical Support \(RFTS\) 15](#) applications through 7 February 2025 to support marine energy testing and development projects. Open Water Support applications can be submitted any time. TEAMER is now offering [Results Dissemination Support](#) (i.e., travel and publication support).

The U.S. DOE Office of Clean Energy Demonstrations (OCED) has opened applications for up to \$400 million, through [the Energy Improvements in Rural or Remote Areas \(ERA\) Program](#), to spur innovative, community-focused, clean energy solutions for rural and remote communities across the United States. Concept papers are due by 27 February 2025.

Career Opportunities

Pacific Northwest National Laboratory is soliciting applications for a [Postdoctoral Research Associate – Coastal Biogeochemistry](#) to study different marine carbon dioxide removal (mCDR) technologies. Applications are due 13 January 2025.

The European Marine Energy Centre (EMEC) is hiring an [Assistant Project Manager](#) to support its project portfolio of wave and tidal energy, offshore wind, hydrogen, and energy systems projects. Applications are due 17 January 2025.

EMEC is also looking for an [Operations and Technology Director](#) to lead its operational, technical, and project delivery activities. Applications are due 20 January 2025.

Northumbria University is offering a [PhD opportunity to develop high-fidelity computational fluid dynamics models for offshore energy systems](#), such as wave energy converters and floating offshore wind turbines. Applications are due 3 February 2025.

East Carolina University (ECU) is recruiting a [PhD in Integrated Coastal Sciences](#) to study the social acceptance and engagement around introducing marine energy technology and participate in Atlantic Marine Energy Center (AMEC) activities. Priority applications to the ECU program are due 15 February 2025.

The University of Oxford is hiring for a [Professorship of Civil Engineering](#) with expertise in coastal, offshore, or marine renewable energy. Applications are due 24 February 2025.

Upcoming Events

Upcoming Webinar

The Supergen Offshore Renewable Energy (ORE) Hub is hosting a webinar, “[The use of Dynamic Bayesian Network Modelling for the Spatial and Temporal Understanding of Marine Ecosystem Dynamics](#)”, on 29 January 2025 from 1:00-2:00pm UTC. During the webinar, Dr. Neda Trivonova from the University of Aberdeen will discuss marine ecosystem dynamics.

Upcoming Conferences

The Advanced Research Projects Agency–Energy (ARPA-E) is hosting the [ARPA-E Energy Innovation Summit](#) on 17-19 March 2025 in Washington, DC, U.S.

The [Supergen ORE Hub](#) is hosting the 8th Supergen ORE Hub Annual Assembly on 15 April 2025 in Manchester, England. Registration will open soon.

Upcoming Courses & Masterclasses

The Atlantic Marine Energy Center is hosting a fully funded, intensive course, [Introduction to Marine Energy](#), from 3-9 August 2025 at the University of New Hampshire in Durham, New Hampshire (U.S.). The course is designed for U.S. undergraduate students (rising juniors and seniors) and beginning graduate students interested in the field of marine energy. Applications are due 10 January 2025.

The Supergen ORE Hub has launched a series of [Offshore Renewable Energy Masterclasses](#), which includes a [Masterclass on Economic and Policy Analysis for Offshore Renewables](#) on 25-26 February 2025 in Edinburgh, Scotland; a [Masterclass on Offshore Structural Integrity](#) on 2-3 April 2025 in Strathclyde, Scotland; and a [Masterclass on Virtual Prototyping of Offshore Renewable Energy Technologies](#) on 30 April and 1 May 2025 in Newburg, Scotland.

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.

[Wave-powered water pump for upwelling in aquaculture: Numerical model and ocean test](#) – Kim et al. 2025

Wave-powered upwelling can increase the productivity and survivability of several aquaculture species. This enhancement is due to transporting cold, nutrient-rich ocean water, typically found lower in the water column, to the surface. Macroalgae, like kelp, exhibit increased growth from these altered conditions. The University of New Hampshire's (UNH) wave-powered water pump (wave pump) is a point absorber wave energy converter (WEC) that uses ocean waves to create relative motion between a spar buoy and a concentric float which drives an internal pump. A numerical model of the wave pump was developed using WEC-Sim to predict device performance in the ocean.

[Study on measurement uncertainty of energy conversion efficiency of tidal energy converters](#) – Jian et al. 2024

Accurate assessment of the measurement uncertainty in the energy conversion efficiency of tidal energy converters is pivotal for a comprehensive analysis of experimental results. This paper presents a sophisticated measurement uncertainty assessment model which is based on energy conversion efficiency experiments of tidal energy converters. The model conducts a careful assessment of the input quantities using both Type A and Type B standard measurement uncertainties and provides an extended understanding of the experimental result uncertainties.

[Wave Energy Potential and the Role of Extreme Events on South America's Coasts. A Regional Frequency Analysis – Mundaca-Moraga et al. 2024](#)

This study examines wave energy potential and generation capacity from extreme waves along South America's Pacific and Atlantic coasts. Utilizing the Regional Frequency Analysis (RFA) method and the WAVERYS wave reanalysis model, 27 homogeneous regions with distinct wave patterns were identified. There's a notable southward increase in median and average wave heights and energy. Unlike previous studies, this research emphasizes the significant role of extreme wave events, which contribute up to 33 % of the total energy—a critical factor often overlooked in regional energy assessments.

Telesto Highlight

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.

[Design Load Case \(DLC\) Generator](#)

The [Design Load Case \(DLC\) Generator](#) is a new addition to PRIMRE and can be found on [Telesto's Design and Build](#) page. Funded by the U.S. WPTO and built in cooperation between Sandia National Laboratories and Evergreen Innovations, the DLC Generator allows the modeling of marine energy forces on a developer's WEC design. The tool is intended to help marine energy developers obtain design load conditions, including 1- and 50-year sea states. These return periods for DLCs are requirements under the [International Electrotechnical Commission \(IEC\) Technical Specification \(TS\) 62600-2](#), an international design standard. The DLC Generator can take measured sea states, tank data, or hindcast sources to generate spectra to apply to the WEC design. It then performs response analysis on results to quantify the extreme characteristics of the loads and motions of the device. As a caveat, interpretation of the modeled results is left to the user and the tool makes no attempt to decide if developer choices comply with international standards.

Marine Energy Atlas Update

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.

[Capacity Factor Tool](#)

The capacity factor represents the ratio of the actual time-averaged power generation to the maximum possible power generation of a particular power plant. The Marine Energy Atlas' Capacity Factor Tool offers the ability to create Capacity Factor maps of specific WECs based on their power matrices. By uploading a power matrix that is representative

of a particular WEC, the Capacity Factor will be calculated, displayed and the result made available for download. [Learn more here.](#)

News & Press Releases

[Introduction of Strategic Resource Areas for Tidal Stream Energy](#) – Welsh Government

For the first time Wales is to have a specific marine planning tool which will help to determine the future of their seas, as part of our strategic planning to enhance the marine environment while also generating clean green energy. In 2019, the Welsh Government introduced Wales's first marine plan, setting out our vision for the sustainable development of our seas and establishing a new planning system. Recently, Huw Irranca-Davies MS, Deputy First Minister and Cabinet, updated the Senedd on a significant step forward in the implementation of the plan, the introduction of the first marine planning Strategic Resource Areas (SRAs) and announced the introduction of the first SRAs, for tidal stream energy.

[U.S. Department of the Treasury Releases Final Rules for Technology-Neutral Clean Electricity Credits](#) – U.S. Department of the Treasury

The U.S. Department of the Treasury and the Internal Revenue Service released final rules for the Clean Electricity Investment and Production Tax Credits – also known as the technology-neutral credits – in tax code sections 45Y and 48E. These credits are central to cutting energy costs for American families and businesses and producing abundant, affordable power to meet growing demand created by major investments in the U.S. economy. The final rules issued recently provide important clarity and certainty around what clean electricity zero-emissions technologies qualify for the credits – including wind, solar, hydropower, marine and hydrokinetic, geothermal, nuclear, and certain waste energy recovery property.

[Wavepiston announces the conclusion of its Wave Energy in Barbados \(WEB\) project, marking the end of the pre-feasibility study.](#) – Wavepiston

After six months of dedicated effort between Wavepiston and Export Barbados (BIDC), Wavepiston announced the conclusion of its Wave Energy in Barbados (WEB) project, marking the end of the pre-feasibility study. The initiative sought to harness the untapped potential of wave energy along Barbados' coastline to diversify the island's renewable energy portfolio and accelerate its climate ambitions. WEB concluded the feasibility of Wavepiston wave energy farms along Barbados' Atlantic coast and provided valuable insights into the technical, environmental and economic challenges that need to be overcome. The project also contributed to Wavepiston's broader understanding of wave energy potential in small island developing states.

Water Power Technologies Office Selects Eight Projects to Support Entrepreneurs and Small Businesses in Hydropower and Marine Energy – U.S. DOE WPTO

The U.S. DOE's WPTO has announced \$800,000 for eight projects that support incubator or accelerator programs that enable entrepreneurship, accelerate hydropower and marine energy innovation, and support business creation and growth across the United States. Meanwhile, marine energy technologies capture energy from waves, tides, ocean and river currents, and even differences in ocean salt levels, temperatures, and pressure. While marine energy is not yet widely deployed across the country, the total available marine energy resource in the United States is equivalent to nearly 60% of all U.S. power generation. The selected projects will each receive \$100,000 and last six to nine months. Then up to four projects will be selected to receive up to \$1 million each to continue their work over three years.

Weco's wave energy converter produces first power (Video) – Offshore Energy

The Hague-based Wave Energy Collective (Weco) has reached a milestone in the development of its Kaizen wave energy converter (WEC), as the device generated its first power. Weco said that it was also able to validate and optimize the design further. The company collaborated with Deltares, a Netherlands-based research institute, during this phase of development. The company said that it is now focused on analyzing the data collected during the trials to further refine its technology. Kaizen WEC is designed to harness the kinetic energy of ocean waves. The system targets the horizontal motion of waves to generate electrical power. Back in June, Weco unveiled that planned to test its WEC in the Delta Flume at Deltares.