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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!

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Announcements

ETIPP Applications Open

The U.S. Department of Energy's (DOE) is accepting applications for the [Energy Transitions Initiative Partnership Project \(ETIPP\)](#), which provides technical assistance for remote and island communities to bolster their energy resilience through tailored solutions, through 10 July 2024.

Power at Sea Prize Submissions Open

The U.S. DOE Water Power Technologies Office (WPTO) is accepting submissions for the [Powering the Blue Economy: Power at Sea Prize](#), which awards competitors to advance technologies that use marine energy to power ocean-based activities, through 26 July 2024.

Calls for Abstracts

The American Geophysical Union (AGU) has opened the [Call for Abstracts](#) for the [AGU 2024 Annual Meeting](#) through 31 July 2024. AGU 2024 will take place 9-13 December 2024 in Washington, D.C. and will feature a session on [Marine Energy to Power the Blue Economy](#).

The Ocean Thermal Energy Association has opened the Call for Speakers for the [10th International Ocean Thermal Energy \(OTEC\) Symposium](#) through 31 July 2024. The symposium will take place 4-5 December 2024 in Rio de Janeiro, Brazil.

The Call for Abstracts for [7th Asian Offshore Wind, Wave and Tidal Energy Conference \(AWTEC 2024\)](#) has been extended through 31 July 2024. AWTEC will take place 20-24 October 2024 in Busan, South Korea.

The Marine Alliance for Science and Technology for Scotland (MASTS) has opened the [Call for Abstracts](#) for the [MASTS 2024 Annual Science Meeting](#) through 22 August 2024. The meeting will take place 5-7 November 2024 in Glasgow, Scotland.

The [Call for Abstracts](#) for the [Offshore Technology Conference \(OTC 2025\)](#) is open through 10 September 2024. OTC will take place 5-8 May 2025 in Houston, Texas, U.S.

Funding & Testing Opportunities

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 \(RFTS\) 13](#) applications through 28 June 2024 to support marine energy testing and development projects. Open Water Support applications can be submitted any time.

The U.S. Advanced Research Projects Agency-Energy (ARPA-E) recently announced up to \$150 million in funding through its [Vision OPEN Call](#) to develop ground-breaking systems that provide abundant primary energy, enable intermodal energy transport, and sustainably meet demand for polymer and other materials. Concept papers are due 16 July 2024.

The U.S. DOE's WPTO recently opened a [\\$5 million funding opportunity](#) to support programs that will support programming and services for entrepreneurs and small businesses in marine energy. WPTO will host an [informational webinar](#) at 1:30pm EDT (5:30pm UTC) on 11 July 2024. Concept papers are due 7 August 2024.

Career Opportunities

The University of Edinburgh is seeking a [Research Assistant in Experimental Testing of Tidal Energy Converter Systems](#) to contribute to the recently launched Co-design to deliver Scalable Tidal Stream Energy (CoTide) project. Applications are due 8 July 2024.

Oscilla Power is looking for a [Mechanical Systems Engineer](#) with experience designing large complex systems for the marine environment and an [Electrical Systems Engineer](#) to join a small but growing team working on the commercialization of marine renewable energy.

Upcoming Events

Upcoming Webinar

The Supergen Offshore Renewable Energy (ORE) Hub is hosting a webinar, "[Advantages of Numerical Simulations of Floating Structures in Offshore Environments and Pullout Capacity of Offshore Anchors in Spatially Variable Soil](#)", from 12:00-1:00pm UTC on 12 July 2024.

Upcoming Workshop

The Supergen ORE Hub is also hosting a virtual [Flexible Funding Call Brokerage Workshop](#) on 4 July 2024 from 2:30-4:30pm BST (1:30-2:30 UTC) to facilitate industry-academia collaborations and develop high-quality submissions to the upcoming funding call.

Upcoming Conferences

The [University Marine Energy Research Community \(UMERC\) + Marine Energy Technology Series \(METS\) Conference 2024](#) will take place on 7-9 August 2024 in Duluth, Minnesota, U.S.

The [Marine Renewables Canada 2024 Conference](#) will take place on 19-21 November 2024 in Halifax, Nova Scotia, Canada. Early bird registration is available until 4 September 2024.

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.

[Hydrokinetic tidal energy resource assessment following international electrotechnical commission guidelines](#) – Deb et al. 2024

Energetic tidal streams are an especially attractive source of clean energy due to the daily occurrence of high tidal flows. However, before any deployment of tidal turbine farms, it is essential to perform a resource assessment depending on the scope and scale of the project. The International Electrotechnical Commission has developed a technical specification for assessing the tidal stream resource “IEC TS 62600-201” to aid in this effort: determine a particular site’s feasibility and design the project layout. In this study, we implemented and validated a three-dimensional numerical model and provided results following the specification for a ‘Stage 2’ project layout design in a highly energetic tidal channel: Tacoma Narrows of Puget Sound, in the State of Washington, USA.

[Techno-economic assessment of global and regional wave energy resource potentials and profiles in hourly resolution](#) – Satymov et al. 2024

Climate change is driving the adoption of sustainable energy, with low-cost solar photovoltaics and wind power at the forefront. However, land-constrained regions and islands have a limited onshore renewable energy potential. Wave power may prove useful for such regions, supported by growing literature in the field. This study delves into wave power's techno-economic potential, addressing a gap in previous assessments focused solely on theoretical or technical prospects. Utilising hourly wave data and a wave energy converter manufacturer's power matrix, global wave electricity yield is estimated. Considering projected costs, levelised cost of electricity is used to gauge economic viability. Although wave power is currently expensive, the results suggest that it could

become cost-competitive with offshore wind power in the 2030s, with levelised cost of electricity below 70 €/MWh by 2035 in areas with good wave energy resources.

Spatial and Temporal Variability of Ocean Thermal Energy Resource of the Pacific Islands – Posterari et al. 2024

A lack of natural resources drives the oil dependency in Pacific Island Countries and Territories (PICTs), hampering energy security and imposing high electricity tariffs in the region. Nevertheless, the Western Equatorial Pacific is known for its large Sea Surface Temperature (SST) and deep-sea water (DSW) temperature difference favorable for harvesting thermal energy. In this study, we selected 18 PICTs in the western Equatorial Pacific to estimate Annual Energy Production (AEP) for a 1 MW class Ocean Thermal Energy Conversion (OTEC) plant. We combined the DSW temperature from the mean in situ Argo profiles and 1 km resolution satellite SST data to estimate the thermal energy resource resolving the fine features of the island coastline. Furthermore, the twenty-year-long SST dataset was used to analyze the SST variability.

Marine Energy Software Update

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

Call for Software Contributions

Like most open-source resources, the more information users contribute, the better the resource becomes! Marine Energy Software is no different. With each software addition to the knowledge hub, the better the resource becomes for users in the international marine energy industry. Do you have a software you would like to contribute to Marine Energy Software? Visit the [Register Software page](#) to add your software today!

Telesto Highlight

[Telesto](#) provides information and guidance for testing, measurement, and data analysis for marine energy research, development, and demonstration, as well as additional resources.

Deployment Resources on Telesto

After several iterations of planning, designing, building, and testing their marine energy devices, the main goal for many marine energy developers is to successfully deploy their device in the marine environment. The Deployment page on Telesto features a variety of useful resources to support marine energy developers gearing up for device deployment, including links to past deployments in the Marine Energy Projects Database, information on environmental effects and monitoring, and lessons learned from past projects.

News & Press Releases

[Halfway Mark Achieved in the Construction of Storm-Resistant OTEC Prototype](#) – Global OTEC

Currently under construction at Hidramar Shipyard in Gran Canaria, Spain, the prototype designed to advance Ocean Thermal Energy Conversion (OTEC) in storm-prone areas has reached the 50% completion milestone. Fabrication began in March, and once completed, the cylindrical hull, along with a cold-water riser pipe and gimbal connection point, will be assembled in the Atlantic Ocean for testing. This structure is being developed by PLOTEC, a pan-European consortium funded by the European Union, which includes seven companies. The project aims to advance the renewable energy transition for Small Island Developing States (SIDS) that are vulnerable to severe weather conditions.

[Inyanga Marine Energy Group and Verdant Morlais agree pioneering tidal energy partnership](#) – Inyanga Marine Energy Group

Inyanga Marine Energy Group and Verdant Morlais Ltd (VML) have signed a Memorandum of Understanding to deliver a 4.9MW tidal stream energy project at Morlais in Wales, the largest consented tidal energy scheme in Europe. The project will take place in a berth close to the 10MW project awarded to Inyanga through the UK Government 'Contracts for Difference' Allocation Round 5 in September 2023, which will utilise Inyanga's patented HydroWing tidal stream technology. VML was also awarded a 4.9MW tidal project at Morlais in Allocation Round 5. VML is a joint venture company established by Verdant Power, Inc. (New York, US) and Duggan Brothers Contractors Ltd (Ireland) to assess and develop tidal energy projects in Ireland and the United Kingdom.

[Proteus Yaw System Achieves Milestone with Successful Acceptance Testing and Prepares for Deployment Subsea](#) – Proteus Marine Renewables

The Proteus Yaw System has successfully completed acceptance testing at DePe Gear Company and is now enroute for deployment subsea. The innovative design is the result of years of collaborative effort with Involution Technologies Ltd. and SKF. Notably, the new yaw system is at least 40% more cost-effective than previous models and boasts a higher load capacity, having been rigorously tested with a test rig for ultimate use on turbines of up to for a 3MW output. The Yaw System plays a critical role in optimizing turbine performance by rotating the turbine around the tower axis to align the rotor with the flow, thereby maximizing power capture and minimizing fatigue loads.

[MoorPower Winter Deployment](#) – Carnegie Clean Energy

Carnegie Clean Energy Limited is pleased to announce the successful redeployment of the MoorPower Demonstrator at the offshore test site in North Fremantle, Western Australia. Following a successful initial deployment which provided validation of

MoorPower's functional design and numerical modelling, this second phase will provide extra data of generation in diverse conditions supporting the commercial roll out of the technology. During the inspection and maintenance period prior to redeployment, the team completed thorough inspections to ensure maximum learning from the system's operations and added additional sensors to capture extra data during this winter deployment.

MacArtney's GreenLink enhances wave energy testing at world-class marine site – MacArtney Underwater Technology

MacArtney's GreenLink terminations will connect innovative technology at PacWave South. This cutting-edge platform, run by Oregon State University, is for testing and optimising marine energy devices in open-ocean environments, driving the application of wave energy as a reliable power source. Through PacWave South (PWS), a full-scale test facility featuring four offshore test berths, Oregon State University (OSU) provides the necessary infrastructure for U.S. and international wave energy innovators to feed the electricity grid with alternative power sources. The project received significant investment from the U.S. DOE to support the development of carbon-free wave energy conversion (WEC) technologies. PWS covers an area of 2 square nautical miles and is licensed to support testing up to 20 commercial-scale WECs.