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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

[Blue Energy Collaborative Scholarships](#)

The International Network on Offshore Renewable Energy (INORE) has opened the Call for Applications for the [2024 Blue Energy Collaborative Scholarships \(BECS\)](#), sponsored by Ocean Energy Systems, until 14 September 2024. The grant aims to support formative research in the field of offshore renewable energy and promote collaboration and communication amongst early-career professionals from diverse disciplines, institutions, and nations.

[Calls for Abstracts](#)

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.

The Oceanic Network has opened the [Call for Workshops](#) for the [2025 International Partnering Forum \(IPF\)](#) through 1 November 2024. IPF 2025 will take place from 28 April to 1 May 2024 in Virginia Beach, Virginia, U.S.

Funding & Testing Opportunities

The Supergen Offshore Renewable Energy (ORE) Hub has launched its fifth [Flexible Fund Call for Proposals](#) and is seeking research proposals from universities or other institutions eligible to hold UK Research and Innovation awards to facilitate a UK-led ORE research projects aligned with, and in partnership with the Hub. Expressions of interest are due 2 September 2024.

UK Research and Innovation has opened a follow-on [funding opportunity](#) to build on existing engineering and physical sciences research outputs to accelerate economic, societal, policy and environmental benefits. Applications must build on prior Engineering and Physical Sciences Research Council funding. Applications are due 24 September 2024.

The Testing Expertise and Access for Marine Energy Research (TEAMER) program, sponsored by the U.S. Department of Energy (DOE) and directed by the Pacific Ocean Energy Trust (POET), is accepting [Request for Technical Support \(RFTS\) 14](#) applications through 4 October 2024 to support marine energy testing and development projects. Open Water Support applications can be submitted any time.

The Ocean Energy Safety Institute (OESI) has published a [Request for Proposals](#) to support research pathways across oil and gas, wind energy, and marine energy. OESI anticipates awarding up to \$16 million to foster enhanced safety protocols, improved technologies, and new insights into risk management. Proposals are due 18 October 2024.

The Natural Environment Research Council (NERC) is planning to open a [funding opportunity](#) to enhance understanding of the ecological, economic, and social value of marine artificial structures' natural capital to inform decision making and policy solutions for management for all life stages. The outline stage will open 5 September 2024 and close 31 October 2024.

The U.S. DOE Water Power Technologies Office (WPTO) has published a [Notice of Intent](#) to provide up to \$112.5 million in funding to advance the commercial readiness of wave energy technologies through open water testing and system validation. DOE anticipates opening this opportunity in September 2024.

Career Opportunities

Pacific Northwest National Laboratory (PNNL) is seeking an [Operations Specialist](#) to provide leadership and safety oversight to the Energy and Environment Directorate's portfolio of research operations across the PNNL Sequim Campus. Applications are due 9 August 2024.

European Marine Energy Centre (EMEC) is looking for a [Project Manager](#) to manage the delivery of a variety of innovative renewable projects, with the focus on EMEC's infrastructure development for both site and developer based activities. Applications are due 12 August 2024.

The Coastal Studies Institute is looking for an [Environmental Specialist](#) who will be responsible for developing and implementing environmental monitoring and research protocols, maintaining

environmental permits, and outreach related to the marine energy device testing for the Atlantic Marine Energy Center (AMEC). Applications are due 30 August 2024.

France Énergies Marines is hiring a [Scientist/Engineer](#) with expertise in the environmental effects of offshore wind and marine energy. During a first phase, work will focus on a project aimed at improving the design of floating substations. Applications are due 3 September 2024.

Upcoming Events

Upcoming Webinar

The U.S. DOE's WPTO is hosting its [WPTO Semiannual Stakeholder Webinar: AI, Machine Learning, and Water Power](#) on 22 August 2024 from 12:30-2:00pm EDT (4:30-6:00pm UTC). The webinar will feature experts from WPTO for a discussion on artificial intelligence and machine learning, including where they see potential benefits and uses of these tools in the hydropower and marine energy sectors and where they may already be in use.

Upcoming Masterclasses

The Supergen ORE Hub is hosting a [Masterclass on Real-Time Hardware-in-the-Loop Experiments for Grid Integration of Offshore Renewable Energy Systems](#) on 4 September 2024 at the University of Warwick in Coventry, England. [Register here.](#)

The Supergen ORE Hub is also hosting a Masterclass on Virtual Prototyping of Offshore Renewable Energy Technologies on 27 & 28 November 2024 at National Decommissioning Centre in Scotland. [Register here.](#)

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.

[Thinking big starting small: identifying considerations for small-scale tidal energy in southwest Nova Scotia – Alp & Colton 2024](#)

Nova Scotia's marine renewable energy (MRE) sector can contribute to provincial goals for carbon neutrality. With this, tidal energy has been an interest to industry stakeholders for over two decades, yet general momentum for the industry has shifted. Previous tidal energy projects and recent studies suggest there needs to be a shift in focus towards scalable tidal energy (i.e., small-scale) development in the province. This research explores the considerations of developing tidal energy in Southwest Nova Scotia with an emphasis on small-scale tidal devices. Using a comprehensive literature review and in-depth semi-structured interviews with stakeholders from different sectors of Nova Scotia's MRE energy industry, key issues and challenges were explored.

[Shared mooring system designs and cost estimates for wave energy arrays](#) – Housner et al. 2024

For floating renewable energy devices to become more cost-efficient and commercially scalable, their mooring system designs must be low-cost and suited for large-scale installations. Large arrays of floating devices, such as wave energy converters (WECs), will likely be designed with an individual mooring system for each device in the array. However, new mooring technology advancements provide options to use shared mooring lines to connect adjacent devices to one another, reducing the total number of anchors in the array, thereby reducing material use and cost. This paper explores the design, modeling, and cost analysis of shared mooring systems for various sizes of arrays consisting of heaving oscillating water column (OWC) WECs.

[Efficiency and power density analysis on phase change material-based ocean thermoelectric generator for underwater vehicle](#) – Chen et al. 2024

Utilizing the volume change of phase change materials (PCM) to realize ocean thermal energy-electric energy conversion is a promising method. The PCM-based ocean thermal engine has the potential to solve the energy limitation problem of underwater vehicles. In this paper, detailed numerical and experimental research on the thermoelectric conversion process was conducted. A numerical model was proposed for thermal–mechanical and mechanical–electrical energy conversion process; and an experimental set-up was built for system identification and model validation. The efficiency and power density of the ocean thermoelectric generator under different configuration were analyzed numerically. Finally, a prototype was developed and tested.

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.

[Decommissioning Resources on Telesto](#)

Decommissioning is a process that varies with the scale of a marine energy deployment. In the United States, for example, small deployments may simply require removing a single device from the water, while larger arrays will require more consultation with the Federal Energy Regulatory Commission, the Bureau of Ocean Energy Management (BOEM), and the Bureau of Safety and Environmental Enforcement. Learn more about decommissioning on Telesto, which provides links to relevant guidance documents and example decommissioning reports.

Signature Projects Update

[Signature Projects](#) bring focus to a selection of research and development projects supported by the U.S. DOE's WPTO and link to all the projects' reports, datasets, and associated papers.

TEAMER

The TEAMER program aims to accelerate the viability of marine renewables by providing access to the United States' best facilities and expertise in order to solve challenges, build knowledge, foster innovation, and drive commercialization. The TEAMER program, sponsored by the U.S. DOE and directed by POET, provides marine energy developers and researchers access to the nation's best facilities and expertise.

MHKiT

MHKiT is an open-source marine energy software, developed in Python and MATLAB, that includes modules for ingesting, quality controlling, processing, visualizing, and managing data. MHKiT-Python and MHKiT-MATLAB provide robust and verified functions in both Python and MATLAB that are needed by the marine energy community to standardize data processing. Calculations and visualizations adhere to International Electrotechnical Commission (IEC) technical specifications and other guidelines.

Wave Energy Prize

The U.S. DOE Wave Energy Prize aimed to double the state-of-the-art performance of wave energy converters (WECs), increase the diversity of organizations involved in WEC technology development, and enable top performers to become viable and competitive industry members. The Wave Energy Prize was an 18-month public design-build-test competition sponsored by the U.S. DOE. The Prize included three phases and four technology gates that progressively evaluated each team's technology and culminated in a test at the Naval Surface Warfare Center's Maneuvering and Seakeeping (MASK) Basin.

News & Press Releases

[Irish Wave Energy Pioneer Deploys World's First Electricity Grid-Scale Device at U.S. Navy Test Site in Hawaii](#) – Ocean Energy USA

Ocean Energy USA LLC recently announced that it has successfully deployed its 826-ton wave energy converter buoy, the OE-35, at the U.S. Navy's Wave Energy Test Site (WETS) on the windward coast of the Hawaiian Island of Oahu. After commissioning and testing onsite, the device will be connected to the Hawaiian electricity grid by subsea cable in the coming weeks. The utility-scale wave energy device measures 125 x 59 feet, has a draft of over 30 feet, and a potential rated capacity of up to 1.25 megawatts in electrical power production. It is located north of Mōkapu Peninsula, at the WETS site in Kaneohe Bay, having been towed there from Honolulu on Friday, July 19. The US\$12million project is part-funded by the US DOE's Office of Energy Efficiency and Renewable Energy and the Sustainable Energy Authority of Ireland.

Eco Wave Power Officially Kicks Off the First MW Scale Wave Energy Project in Portugal

– Eco Wave Power

Eco Wave Power recently announced that Inna Braverman, Founder and Chief Executive Officer of Eco Wave Power, and Eco Wave Power's engineering team, have arrived for a meeting and an official site-visit with APDL (Administração dos Portos do Douro, Leixões e Viana do Castelo, S.A), and other relevant stakeholders for the official kickoff of the Company's first MW-scale wave energy project, to be located in the city of Porto, in Portugal. Following the meeting with APDL, Eco Wave Power's engineering team held a site visit to the breakwater and the room underneath the breakwater, where Eco Wave Power's energy conversion equipment will be installed, and later opened to the public, as a first of its kind wave energy museum and education center.

New legislation proposes \$1B investment to propel marine energy commercialization in US

– Offshore Energy

The Marine Energy Technologies Acceleration Act, legislation that would invest \$1 billion to propel marine energy toward full-scale commercialization, has been introduced to the U.S. House of Representatives. Led by Congresswomen Nanette Barragán (CA-44) and Suzanne Bonamici (OR-01), the Marine Energy Technologies Acceleration Act allocates significant funding to the U.S. Department of Energy's (U.S. DOE) Water Power Technologies Office (WPTO) for demonstration projects, research and development, resource potential mapping, workforce development, and streamlined permitting processes.

WES announces Round 2 Direct Generation competition selections – Wave Energy

Scotland

In the second round of the Direct Generation Concept Design Competition, Wave Energy Scotland (WES) has awarded a total of £400,000 to be shared between two projects. Direct generation seeks to harness movement (stretching, twisting, bending) of a material into electrical energy without the more traditional conversion using electrical generators. These materials are more commonly used as actuators, sensors and small-scale energy harvesting applications. Round 1 of the Direct Generation Concept Competition saw five teams develop wave energy converter concept designs enabling them to analyze benefits, identify R&D requirements and build a solid understanding of the challenges associated with applying flexible, distributed, direct energy conversion solutions to wave energy.

PacWave Construction Updates – PacWave

The installation of terrestrial cables is underway and the installation of the subsea cables should start in the next few days. This will be the final phase of construction of PacWave South and is by far the largest and most complex part of the overall construction process. More details are provided below. Construction of the PacWave South medium voltage Utility Connection and Monitoring Facility (UCMF) on NW Wenger Lane started in February, 2023 and should be completed in late 2024. Construction of the underground

components of PacWave South was completed in May, 2022 having started on June 1, 2021. Most of the activity was focused on the Driftwood Beach State Recreation Site area in Seal Rock, Oregon and involved horizontal directional drilling beneath the ocean shore to install cable conduits deep under the beach to the park, and from the park to the UCMF.

OWC validates WaveX's wave power generator with feasibility statement – Offshore Energy

Renewable energy business WaveX has received a statement of feasibility from OWC Australia & New Zealand, a part of energy and marine consultancy ABL Group, for its wave-powered generator technology. After a technical review, WaveX said that OWC issued a Statement of Feasibility for the D-Spar wave power generator, in accordance with IEC TS 62600-4:2020, Marine energy – Wave, tidal and other water current converters – Part 4: Specification for establishing the qualification of new technology. The ongoing engagement with OWC will support further development and qualification of the technology, validating its technical, commercial, and environmental credentials.