18 April 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!

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Announcements

Contributing to PRIMRE

Did you know you can contribute marine energy data, documents, and other information to PRIMRE? Check out the 2-minute [Contributing to PRIMRE video](#) or visit the [Contributing to PRIMRE webpage](#) to learn more. Still have questions? [Email us!](#)
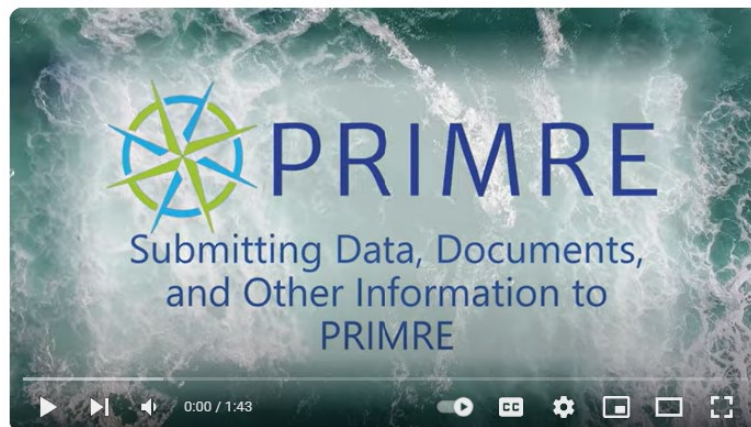
Request for Information

Pacific Northwest National Laboratory (PNNL) is [requesting information](#) from developers, owners, and/or manufacturers of small-scale current energy devices capable of deployment and operation to power coastal aquaculture operations. Responses are due 6 June 2025.

The Call for Proposals for sessions and town halls at the [2026 Ocean Sciences Meeting (OSM)](#) is open until 28 May 2025. OSM will take place on 22-27 February 2026 in Glasgow, Scotland.

Funding & Testing Opportunities

Research Infrastructure Services for Renewable Energy (RISEnergy) has opened its second [Transnational Access Call](#), inviting researchers from academia and industry to propose innovative solutions to improve energy systems or cut the life cycle costs of renewable energy technologies in Europe. Applications are due 4 May 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) 16](#) applications through 6 June 2025 to support marine energy testing and development projects. Open Water Support applications can be submitted any time. TEAMER also offers [Results Dissemination Support](#) (e.g., travel support).

Career Opportunities

Fundy Ocean Research Centre for Energy (FORCE), Canada's test centre for tidal stream energy research and technology, is seeking a [Communications & Outreach Assistant](#) and a [Facilities & Guest Services Assistant](#) to support FORCE's public engagement efforts and daily operations. Applications are due 25 April 2025.

Upcoming Events

Upcoming Webinars

The Supergen Offshore Renewable Energy (ORE) Hub is hosting a webinar, "[Community Perspectives of Wave Energy and Open-Water Testing at PacWave, Oregon](#)", on 29 April 2025 from 4:00-5:00pm UTC. This session will explore the factors that influence public responses to new developments and help us to understand what may slow or hinder the planning and consenting processes. [Register here.](#)

TEAMER is hosting a webinar, "[How to Write a Good Test Plan](#)", on 30 April 2025 from 11:00am-12:00pm PDT (6:00-7:00pm UTC). The webinar will focus on what makes up a good scientific test plan, including info specific to marine energy research and the TEAMER program. [Register here.](#)

The Pacific Offshore Wind Consortium (POWC) is hosting a webinar, "[Offshore Grid Connection: Cable Laying and Monitoring](#)", on 12 May 2025 from 2:00-4:00pm PST (9:00-11:00pm UTC). The webinar will describe the cabling process, including pre-installation environmental surveys and post-installation monitoring, at the PacWave wave energy testing facility. [Register here.](#)

The [44th International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2025)](#) will take place on 22-27 June 2025 in Vancouver, British Columbia, Canada.

The [Ocean Renewable Energy Conference (OREC)](#) will now partner with the [2025 University Marine Energy Research Community (UMERC) Conference](#), which will take place on 12-14 August 2025 at Oregon State University in Corvallis, Oregon, USA.

Upcoming Masterclasses

The Supergen ORE Hub is hosting a series of [masterclasses](#), including a [Masterclass on Virtual Prototyping of Offshore Renewable Energy Technologies](#) on 30 April and 1 May 2025 at the National Decommissioning Centre in Aberdeen, Scotland; a [Masterclass on Environmental Contours and Extreme Value Analysis](#) on 15-16 May 2025 at the University of Exeter in Exeter, England; and a [Masterclass on Offshore Geotechnics](#) on 27-28 May 2025 at the University of Southampton in Southampton, England.

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.

[Ocean Energy Stats & Trends 2024](#) – Ocean Energy Europe 2025

A 165 MW pipeline across 15 ocean energy farms is supported by public funding and scheduled for deployment over the next five years. This pipeline results directly from recent grants and Contracts for Difference/feed-in tariff schemes, which offer market clarity and predictable returns for private investors. Negotiations to reach financial close for tidal pre-commercial farms accelerated, while several full-scale wave devices were deployed. The US and China continued their strong political and financial support for the sector, creating opportunities for European companies but also challenging European technology leadership. EU and Member States must press on to industrialise ocean energy and transform years of innovation support into commercial success.

[Resource characterization of a commercial tidal stream energy site: Morlais Irish Sea](#) – Chisholm et al. 2025

Tidal stream energy conversion is an attractive renewable energy option due to the predictability of tides and high energy density. Yet, before sites can be exploited to their full potential, detailed resource characterization is required to optimize device selection and array configuration, and to minimize environmental impacts. This study focuses on the Morlais tidal energy site in North Wales, where developers have been awarded 38 MW of tidal stream generation capacity by the UK Government. The study analyses sea bed and water column data collected across the site over the past decade, including

multibeam echosounder data, multiple acoustic Doppler current profiler (ADCP) time series, meteorological and wave data. Additionally, high-resolution tidal and wave models are applied to further characterize the spatio-temporal variability.

[Benchmark study of the DTU OWC chamber with both two-way and one-way absorption](#) – Bingham et al. 2025

This paper reports on a benchmark study based on small-scale (1:50) measurements of a single, oscillating water column chamber mounted sideways in a long flume. The geometry of the OWC chamber is extracted from a barge-like, attenuator-type floating concept "KNSwing" with 40 chambers targeted for deployment in the Danish part of the North Sea. In addition to traditional two-way energy extraction we also consider one-way energy extraction with passive venting and compare chamber response, pressures and total absorbed energy between the two methods. A blind study was established for the numerical modeling, with participants applying several implementations of weakly nonlinear potential flow theory and commercial Navier–Stokes solvers (CFD). Both compressible and incompressible models were used for the air phase.

Marine Energy Software Update

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

[WEC-Sim v6.1.2](#)

[WEC-Sim (Wave Energy Converter SIMulator)](#) is an open-source software for simulating wave energy converters and other floating or submerged systems in the time-domain. The software is developed in MATLAB/SIMULINK using the multi-body dynamics solver Simscape Multibody. The [WEC-Sim Applications repository](#) contains a wide variety of examples that show how WEC-Sim can be used to model, including desalination, mooring dynamics, nonlinear hydrodynamic bodies, passive yawing, batch simulations and many others. The [WEC-Sim v6.1.2](#) release features various bug fixes and documentation improvements.

[OpenFAST v4.0.0 Release](#)

OpenFAST is an open-source software package developed by the National Renewable Energy Laboratory (NREL). It is a multi-physics, multi-fidelity tool for simulating the coupled dynamic response of wind and current energy turbines. [OpenFAST v4.0.0](#) features many new updates such as linearization for marine energy turbines, aeromap calculations, an updated Python library for OpenFAST file handling, and revised wind and wave data handling, many hydrodynamic improvements, including the splitting of the wave field (new SeaState (SS) module) from HydroDyn. The most up-to-date version of this release is [OpenFAST v4.0.3](#).

[MoorDyn v2.4.0 Release](#)

MoorDyn is an open-source software package developed by NREL. It is used across the marine energy industry to numerically model mooring line and umbilical cable dynamics using a lumped mass discretization. MoorDyn is an adaptable software written in Fortran and C++, giving it the capability to couple with OpenFAST and WEC-Sim. Along with general bug fixes, [MoorDyn-C v2.4.0](#) features the addition of a time-domain cross-flow vortex induced vibration model for sub-sea power cables and a mean load dependent viscoelastic model for synthetic mooring lines. These new features have also been incorporated into MoorDyn-F and are currently available on the OpenFAST dev branch. They will be included in the upcoming OpenFAST release 4.1.0.

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.

[Regulations and Compliance](#)

The path to commercialization of marine energy leads through the certification process. Telesto's [Regulations and Compliance](#) page has updated information on certification, certification bodies, background on regulatory jurisdictions, and guidelines. The page also features several helpful links, including the [Marine Energy Environmental Toolkit](#), which provides a flowchart to determine U.S. federal regulatory jurisdiction based on location, in addition to state by state regulatory bodies. [OES-Environmental](#) resources provide guidance on the international jurisdiction and consenting process in other countries. The [IEC Technology Certification](#) process is also highlighted with a discussion of the IECRE Marine Energy Prototype Certification, which can now be assessed by Lloyd's Register. In 2024, Lloyd's Register became the first IECRE Renewable Energy Certification Body for marine energy. Certification of your technology to accepted standards is a stepping-stone to stakeholder assurance.

News & Press Releases

[OUI spinout Porpoise Power emerges from stealth, aiming to power the grid with next-generation tidal energy](#) – Oxford University Innovation

Porpoise Power has emerged from stealth with a bold new take on tidal energy — one that mimics nature to overcome the limitations of traditional marine turbines. Oxford University Innovation spinout Porpoise Power is developing a novel system designed to make tidal energy practical, affordable, and reliable at scale. Its £1.2 million pre-seed round in 2024 was led by Zero Carbon Capital, with support from Creator Fund and Oxford Science Enterprises (OSE). The company's design is inspired by how dolphins swim. Instead of spinning like traditional turbines, a fin moves up and down in the tidal

stream to generate energy. This approach works in more places and conditions, making tidal power a more practical and scalable source of clean electricity.

[Dutch province backs tidal energy expansion to add to Wadden Islands' energy independence](#) – **Offshore Energy**

The Friesland Province has allocated €625,000 to the PROSIT project, which aims to help the Wadden Islands become partly self-sufficient in energy by harnessing tidal currents. According to the Friesland Province, PROSIT builds on SeaQurrent's TidalKite demonstration near Ameland. The system uses tidal currents to generate electricity and has been under testing in the Borndiep channel. While the system has shown promising results, further adjustments are needed to adapt to the Wadden Sea's tidal dynamics. The provincial funding enables those next steps. In 2023, Dutch company SeaQurrent conducted the first tests on its TidalKite tidal energy device as it prepares for upcoming deployment offshore the Netherlands.

[Province Prepares Tidal Energy Procurement](#) – **Nova Scotia Government**

Companies interested in testing tidal energy projects in the Bay of Fundy will be able to apply for a site in the Minas Passage later this spring. Nova Scotia has the highest tides of the world and there is great potential to harness them to generate electricity, create more green jobs and attract more investment. The Province is hiring consultant Power Advisory LLC to manage a procurement to fill two vacant berths at the Fundy Ocean Research Centre for Energy (FORCE) near Parrsboro. Power Advisory LLC will start the procurement in May. The Department of Energy will grant licences and power purchase agreements with Nova Scotia Power to successful applicants. Licence holders will develop agreements with FORCE to use the facility.

[MeyGen tidal turbine delivers highest-ever output since installation](#) – **Offshore Energy**

UK-based tidal energy company Proteus Marine Renewables (PMR) has confirmed that the AR1500 tidal turbine deployed at the MeyGen site in Scotland exported 372 MWh of electricity in March 2025, marking the turbine's highest monthly output since it began operations in 2017. According to PMR, the turbine achieved an average availability of 95% across the first quarter of 2025. The electricity generated is said to be enough to supply hundreds of households, relying solely on tidal stream energy. While Series-2 units, including the AR3000, are in development, the continued output from the 2017-installed Series-1 AR1500 demonstrates the long-term potential of tidal technology in contributing to the renewable energy mix, PMR noted.

[Channeling Wave Energy for Advanced Ocean Monitoring](#) – **Tech Briefs**

Remote sensing offers a powerful tool for environmental protection and sustainable management. While many remote sensing companies use wind or solar energy to power their platforms, California-based startup Dolphin Labs is harnessing wave energy to enable sensing networks for enhanced maritime domain awareness, improving the safety

and security of offshore natural resources and critical infrastructure. Dolphin Labs was founded in 2022 as a spinoff of Cal Wave Power Technologies, which works on grid-scale renewable energy. The company's xNode Wave Energy Converter is a resilient ocean-observing platform with built-in renewable power generation. The Dolphin Labs team is moving forward toward that singular goal of a sea trial this year, with support from incubators.