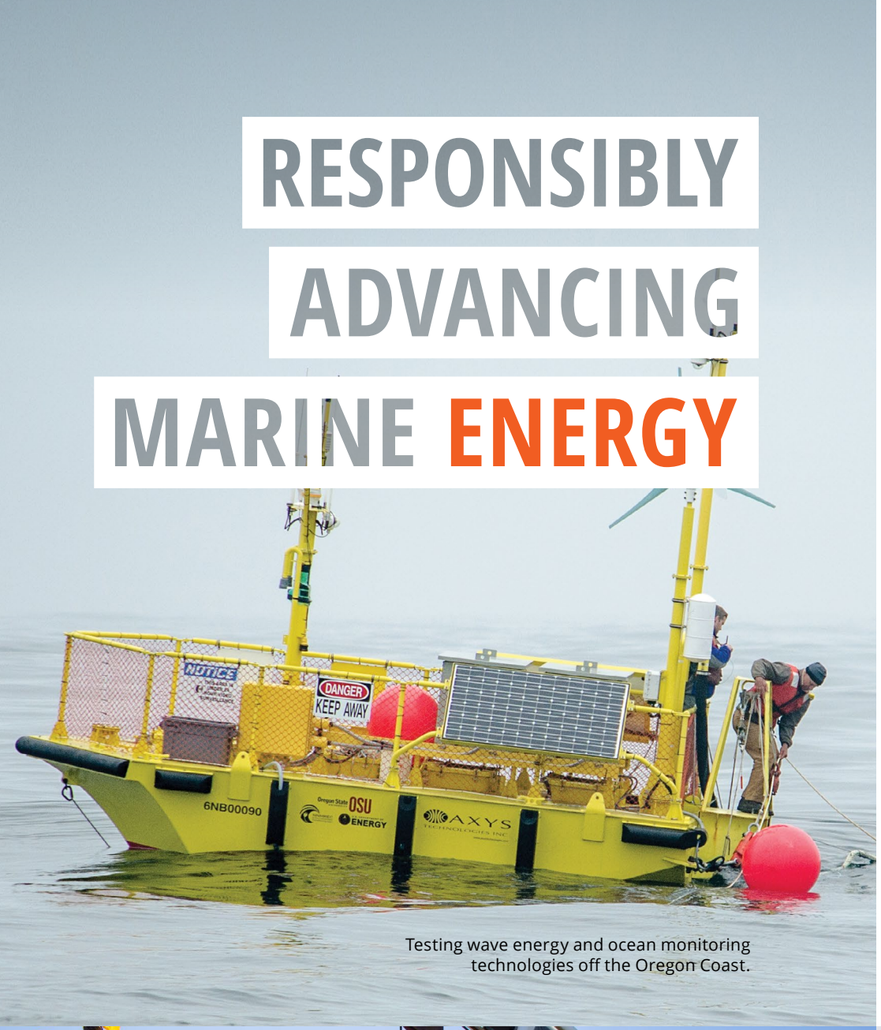
RESPONSIBLY ADVANCING MARINE ENERGY



Testing wave energy and ocean monitoring technologies off the Oregon Coast.

RESEARCH AND DEVELOPMENT aims to close key gaps in understanding marine energy systems. PMEC's R&D capabilities can be grouped into six primary areas:

Marine Energy Resource Characterization: Increasing understanding of waves and currents, particularly the extremes that impose the highest structural loads.

Wave Energy Conversion Technology: Developing cost-effective, reliable wave energy systems using hydromechanics, electromechanical design and advanced control theory.

Current Energy and Turbine Technology: Using novel materials and flow-visualization to spur breakthroughs in performance of individual turbines and dense arrays.

Marine Operations: Addressing the myriad of difficulties working in the marine environment by leveraging advances in robotics and autonomous systems.

Environmental Effects: Reducing uncertainty about the ecological effects of marine energy installations, identifying and mitigating risks.

Society and Policy: Examining the human dimensions of marine energy, including communities where systems are installed, native tribes, fisheries, and others who depend on marine resources, as well as federal, state, and local government agencies.

TESTING includes both laboratories and site installations for device characterization, energy production, and survivability. PMEC has full access to resources at UW, OSU, and UAF, including:

O.H. Hinsdale Wave Research Laboratory (OSU): Featuring a 104-meter large wave flume, the largest of its kind in North America.

PacWave (OSU): Offering pre-permitted, grid-connected wave energy testing in a high-energy, open ocean environment located seven miles off the Pacific coast near Newport, Oregon (opening in 2021).

Tanana River Hydrokinetic Test Site (UAF): Testing hydrokinetic power generating devices and related technologies while characterizing the river environment under real-world conditions.

Harris Hydraulic Lab (UW): Specializing in environmental fluid mechanics using a wind-wave-current facility and a water channel.

R/V Russell Davis Light (UW): A purpose-built vessel for current turbine testing in either self-propelled or moored modes of operation; equipped with instrumentation to characterize power output and structural loads.

Power Systems Integration Lab (UAF): Providing a controlled environment for a broad range of hardware and software components within an integrated grid system.

Wallace Energy Systems and Renewables Facility (OSU): Featuring a wave energy linear test bed that enables dynamic testing.

An integrated sensor package for environmental monitoring after deployment off the Washington coast.

EDUCATION AND OUTREACH are essential to the long-term success of the marine energy industry. PMEC prepares both undergraduate and graduate students for careers in marine energy and related fields.

PMEC offers opportunities for hands-on research, internships, and fellowships at all three member universities. PMEC also collaborates extensively with marine energy stakeholders, including technology developers, academic and national laboratory researchers, coastal community members, ocean users, federal and state regulators, and government officials.

A student conducts tests at the Tanana River Hydrokinetic Test Site.

Marine energy — including wave, tidal, riverine, and offshore wind — holds great potential for reliable, renewable, carbon-free power for grid, maritime, and other energy applications. PMEC brings that potential to reality.

PMEC unites the unparalleled knowledge, experience, and testing facilities of three leading Universities: the University of Washington, Oregon State University, and the University of Alaska Fairbanks.

With more than 100 faculty, staff, and students from multiple disciplines, we collaborate closely with industry, governments, and community stakeholders to understand the technical, environmental, and societal dimensions of marine energy.

PMEC serves as an objective voice regarding the opportunities, capabilities, and effects of marine energy. Our mission is to responsibly advance marine energy by expanding scientific understanding, engaging stakeholders, and educating students.

Testing a hydrokinetic turbine and debris diversion in Alaska.

CONNECTING PEOPLE TO THE POWER OF THE OCEAN

LEARN MORE about PMEC, our outstanding researchers, capabilities, and facilities at **pmec.us**. Contact us at the appropriate address below for inquiries regarding research, testing, or other engagement with PMEC.

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Our Industry Partner Network (IPN) includes an international cross-section of the marine energy sector, from technology developers to supporting industries. Contact us at ipn@pmec.us.