

Turbine for Oceanographic Sensors

Hydrovolts Inc. and the Woods Hole Oceanographic Institute (WHOI) have signed a Memorandum of Agreement (MOA) for development of hydrokinetic technology to provide renewable power for remote ocean sensors. Hydrovolts, based in Seattle, is an early-stage company with hydropower technology. Use of this technology will bring considerable savings on battery changes.

Hydrovolts will license its Flipwing hydrokinetic turbine technology to WHOI and provide design and programming assistance. WHOI engineers will develop applications for the turbine to generate renewable energy from ocean currents that will trickle-charge battery packs for WHOI sensors in the ocean.

Ocean data sensors are often deployed far from shore, and their batteries have limited power. Changing the batteries often means an ocean-going vessel must be chartered to travel to the site and maintain station for several days. The cost of such vessels exceeds USD10,000 per day. WHOI has at least one sensor deployment where the Hydrovolts technology could reduce battery costs by more than USD100,000 per year.

The Hydrovolts Flipwing turbine is a patent-pending drag design that rotates in currents as slow as 20 cm/sec or about half a knot. This makes it applicable to a large area of the open ocean as well as coastal tidal regions. It has been demonstrated and validated for potential sensor applications at the University of Washington in Seattle.

The WHOI development program will be known as Hydrosense. The MOA covers collaboration principles and creates a foundation for development of ocean renewable energy research at WHOI.

Hydrovolts is currently a semi-finalist in the Clean Tech Open, a regional business plan contest sponsored by investment firms and service providers.