

Getting A Charge Out Of Nature

Microturbine Uses Water, Wind to Power USB Devices

Memorial University of Newfoundland



At Seaformatics Systems Inc., they think both big *and* small.

That's how a proposal from an engineering professor at Memorial University of Newfoundland to create a power-harvesting system for use at sea by oceanographers ultimately led to a portable microturbine for use in rivers and streams by backpackers, canoeists and outdoor workers needing to power up their USB devices.

After eight years working on professor Vlastimil Masek's suggestion, Seaformatics was founded in 2013 by four Memorial graduates looking to commercialize their new ocean-monitoring technology, called SeaLily.

Then a funny thing happened. With funding from Genesis Centre, the university's innovation hub for tech-based projects, Seaformatics decided to build a small prototype of SeaLily for trade show demonstrations. They named their mini-version WaterLily.

“ Almost on a whim, the team posted a video of WaterLily on Facebook to gauge interest among outdoors enthusiasts. Within two days the video had notched 22,000 views, and pre-orders

began to pour in from more than a dozen countries.

WaterLily was quickly popular with consumers wanting to recharge their phones, cameras and other personal devices while on the go. And it had an advantage over its competition.

As company CEO Andrew Cook told NTV News: “The real novel piece about WaterLily is that you can put it in a river ... but it will also work in wind. So on a nice windy day, you can hang it from a tree and recharge your devices that way.”

A typical phone recharge takes two to four hours, depending on water or wind conditions.

Canadian adventurer TA Loeffler used both methods on a 90-day canoe expedition from Jasper, Alberta, to the Arctic Ocean. She gave her WaterLily two thumbs up for its performance on the 3,080-kilometre trip along the Athabasca, Slave and Mackenzie rivers.

Seaformatics has added a hand crank to its product line. “So if it’s an emergency situation and you don’t have water and wind, you can hand-crank it and get enough power to make a call,” said Cook.

With other add-ons in the works, “I think our future is very bright,” he said. Even if it all began somewhat by accident.

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