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## **Captions:** Unlocking ocean power: \$3.6M for community-centric wave energy converters



[Zuo\\_and\\_buoy.jpg](#): Inside the University of Michigan's Marine Hydrodynamics Laboratory, Lei Zuo, the Herbert C. Sadler Collegiate Professor of Engineering and a professor of naval architecture and marine engineering, inspects a prototype buoy that generates electricity from wave motion. Whenever the buoy bobs up or down, the light blinks on. Photo credit: Marcin Szczepanski, Michigan Engineering.

Alt text: A metal buoy floats inside an indoor tank of water. A man closely inspects an illuminated light bulb attached to the top of a post on the buoy.



[Group photo buoy.jpg](#): Lei Zuo (second right), a professor of naval architecture and marine engineering, Jeff Scruggs (second left), a professor of civil and environmental engineering, Xiaofan Li, an assistant research scientist of naval architecture and marine engineering (first right), and Jui-Chen Chen (first left), a masters student of naval architecture and marine engineering, demonstrate how a buoy can generate electricity at the University of Michigan's Marine Hydrodynamics Laboratory. Photo credit: Marcin Szczepanski, Michigan Engineering.

Alt text: Four men stand on a platform stretching across a large indoor tank of water. A light shines on a metal buoy floating in the tank near the group.





[Wave tank.jpg](#): These waves rippling down the length of the Marine Hydrodynamics Lab's towing tank have enough energy to power a light. In the U.S., waves could cover 35% of the mainland's electricity demand, and all of Alaska and Hawaii's electricity needs. Photo credit: Marcin Szczepanski, Michigan Engineering.

Alt text: An oscillating plunger displaces water and sends waves down the length of a narrow indoor tank of water.



[Jennettes Pier.jpg](#): Jennette's Pier stretches out into the Atlantic Ocean in Nags Head, N.C. The pier's wave energy test center is overseen by the North Carolina Renewable Energy Program within the Coastal Studies Institute and is one of the potential test sites. Photo credit: John McCord, Coastal Studies Institute, East Carolina University.

Alt text: A long boardwalk extends into the vibrant blue waters of the Atlantic Ocean. A large structure is at the shore end of the pier.





[Jennettes Pier Test Deployment.jpg](#): Jennette's Pier is home to the Coastal Studies Institute's Wave Energy Test Center. The facility has been a testing location for several prototype wave energy devices, such as the National Renewable Energy Laboratory's HERO wave energy converter—the device hanging from the crane. It was built to remove salt from water using wave power. Photo credit: John McCord, Coastal Studies Institute, East Carolina University.

Alt text: A crew of construction workers lower a wave energy device into the ocean. The device resembles an inner tube with machinery in the center seat.



[Beaver\\_Island.jpg](#): A satellite image of Beaver Island in Lake Michigan, one of the test locations. Beaver Island is the largest in the photo. [Photo credit: NASA Earth Observatory](#).

Alt text: Beaver Island is a large green mass surrounded by the dark blue waters of Lake Michigan. Smaller islands surround Beaver Island to the north and west.

[All images](#)