Ocean mavericks in Maine turn tide for electrical grid

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(Phys.org)—Sadly speaking, the U.S. ocean-energy industry has had to take a back seat to Europe, where government subsidies help entrepreneurs and innovative companies work on their technologies. Happily speaking, the United States has, as one writer said, found its footing, but, more precisely, got feet wet. For the first time in the United States, power from the ocean is being generated for the power grid and the action is all up in Maine. Ocean Renewable Power Company announced this month that its tidal energy project is delivering electricity

to the Bangor Hydro Electric Company's power grid. ORPC launched the Maine tidal device and as a result electricity is flowing from ORPC's "Cobscook Bay Tidal Project."

The company's tidal energy effort marks the first power from any commercial ocean energy project to be delivered to an electric utility grid in the United States. ORPC's device generates electricity from a tidal energy turbine on the bottom of Cobscook Bay, in easternmost Maine.

ORPC's TidGen turbine generator unit being readied for installation at Cobscook Bay Tidal Energy Project site

Eastport is off of Cobscook Bay and the Eastport area has Maine's highest tides—20 feet. The device's blades churn as the tides rise and fall. Significantly, Cobscook Bay is also part of the bigger Bay of Fundy, off the Maine coast, an enormous tidal power resource; and said to have the highest tides in the world.

The turbine, at the bottom of Cobscook Bay, can generate 180 kilowatts of electricity, which is said to be sufficient to power 25 to 30 homes. Two more devices will be installed at ORPC's Cobscook Bay Project site in late 2013. The three-device system will generate power for many more homes. Power has been flowing for some weeks but ORPC waited to make the announcement only after Bangor Hydro confirmed it. Bangor Hydro owns the lines that connect to the submerged turbine. They verified power was being delivered to the grid.

The device, TidGen, is in water depths of 15 to 30 meters, and has the advantage of water flowing in and out of the bay as the tides change. The company's generator is also the first tidal generator that that creates electricity without a dam.

"This is the first power from any ocean energy project including offshore wind, wave and tidal, to be delivered to an electric utility grid in the United States, and it is the only ocean energy project, other than one using a dam, that delivers power to a utility grid anywhere in North, Central and South America," ORPC said.

Since 2004, ORPC has worked on technology and projects that use ocean and river currents to produce electricity to power homes and businesses. The company is based in Portland, with field operations in Eastport.

More information: www.orpc.co/newsevents_pressre … aspx?id=OPE6LzAgijk=