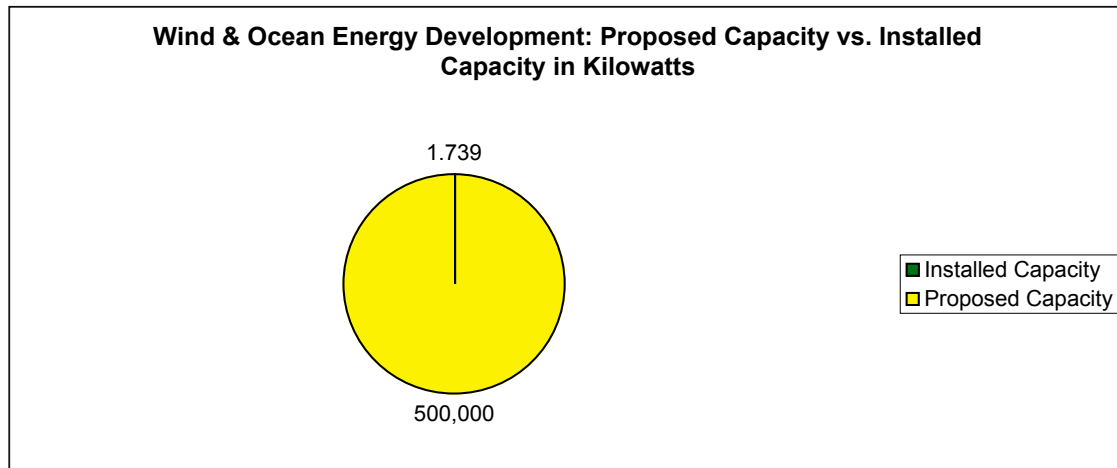


## Wind and Ocean Energy Development Activity

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**Summary:** At Cape Cod Regional Technical High School in Harwich, Cape Cod's first grid-connected wind turbine - a 1.739 kW machine - began generating green power in June 2005. By the end of the year, it had harnessed local energy flows to produce more than 1300 kWh of electricity. Its net generation was equivalent to about 40% of the demand of an average home. Its total fuel cost was zero, as were some of its "true cost" impacts - no pollutants or greenhouse gases were released, and no finite fuel resources were extracted elsewhere and imported to the Cape.

Cape Cod Tech's turbine represents a small but significant harbinger of the region's energy future. By the end of 2005, more than 500 MW of wind generating capacity remained under active consideration for sites in Nantucket Sound and within almost every town on Cape Cod. In addition, an institutional framework and technology foundation were being created for deepwater wind projects off the Cape, commercial feasibility had been assessed for a 100-MW wave energy farm off Cape Cod National Seashore, and commercial feasibility was being studied for a tidal current energy project in Muskeget Channel between Martha's Vineyard and Nantucket. If just the wind projects being actively pursued by private developers and by local communities, institutions, businesses and residents were to be constructed as proposed, they would on average satisfy more than 75% of Cape Cod's electricity demand. At maximum capacity, they would transform the Cape into a net exporter of green power, even during peak demand periods.

In 2006, the first large-scale, grid-connected wind turbine started spinning on Cape Cod at the Massachusetts Maritime Academy, other land-based wind installations are scheduled, and a range of regulatory review, development and precommercial development activities will continue. Whether additional

proposed projects will be built - and whether local communities will take measures to maximize possible benefits from regionally abundant wind and ocean resources while minimizing any adverse impacts associated with their development - remain to be determined.

Sources: Data from Massachusetts Technology Collaborative, Electric Power Research Institute, and Cape & Islands Energy Information Clearinghouse ([www.cirenew.info/oceanEnergy.htm](http://www.cirenew.info/oceanEnergy.htm)); analysis by WEEinfo Services.