

## Mass. among states backing tidal power study

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By Keith Doucette, Associated Press | October 23, 2005

HALIFAX, Nova Scotia -- At least seven prime locations along the shores of the Bay of Fundy are being considered as test sites for a new type of underwater turbine that may one day harness the bay's immense tidal power.

George Hagerman, an American researcher who specializes in ocean energy systems, recently toured the sites in Nova Scotia and New Brunswick, most of them along scenic capes or entrances to smaller bays.

Hagerman, a research associate with Virginia Tech's Advanced Research Institute in Arlington, Va., is working on an international feasibility study on behalf of the California-based Electric Power Research Institute.

Nova Scotia and New Brunswick have joined Maine, Massachusetts, Alaska, Washington, and California to pay for the \$425,000 study.

Tidal-flow technology, which has been in use in a pilot project off Britain for the last two years, uses large turbines that are anchored to the ocean bottom. The propeller-like turbines are similar to land-based windmills.

The Bay of Fundy is of particular interest to researchers because its tides are among the highest and most powerful in the world.

Hagerman stressed that no one has committed to building anything at this point. The final report, to be prepared by a team from the Electric Power Research Institute, isn't expected to be completed until next spring.

The study will be one of a series that each jurisdiction will scrutinize before deciding whether a test run is economically viable.

Despite being a decades-old dream, there is currently only one tidal power facility in the Bay of Fundy. The Annapolis Tidal Generating Station at Annapolis Royal, Nova Scotia, is one of only three of its kind in the world. Built in 1984, it is capable of supplying power to 4,000 homes.

But unlike the new tidal turbines, the station uses a dam to hold back large amounts of tidal water. Nova Scotia Power Inc., the privately owned utility that operates the generating station, has said it wants to use technology that is friendlier to the environment.

"In this new tidal flow technology, there is no dam involved," said Bill Richards, an engineering specialist with the company. "We just have the water flow doing the work, so there's no need to have the environmental impacts associated with a dam."

Harry Thurston, a biologist and author of the book "Tidal Life: A Natural History of the Bay of Fundy," said he wants to see the study before passing judgment on the new technology.

"It's possible, perhaps, that there are technologies that wouldn't have a major impact from an economic and ecological point of view, but I think it's too early to say that," said Thurston.

The naturalist called the bay one of the most important ecological areas on the continent -- one vital to migratory bird species, with a rich fishery and a viable tourism industry.

All are points that weren't lost on Hagerman, who said he was impressed by the region's natural beauty.

"On a personal note, I feel very strongly that whatever we do, we want to make sure that it preserves the beauty of these places because they really are dramatic," he said. ■