

Sea change for N.S.

\$12-million tidal power project planned for Bay of Fundy

By TOM McCOAG Amherst Bureau

PREMIER RODNEY MacDonald announced Tuesday the province has approved a \$12-million tidal power demonstration project in the Bay of Fundy that could make Nova Scotia a "groundbreaking" force in green energy.

Minas Basin Pulp and Power of Hantsport will build a demonstration facility, including underwater transmission lines that will take the power generated by turbines at the bottom of the Minas Channel to a building containing the electrical equipment needed to synchronize with the Nova Scotia power grid.

RELATED

- **Waiting for the tide to turn**
- **Province needs to be aggressive in developing tidal power**

The building will also house a research laboratory that will help private companies and the province determine whether it is environmentally and commercially feasible to operate power-generating turbines underwater in the Minas Basin.

Researchers will examine the impact on the basin's fishery and bird population and the bay's tides and currents. They will also determine whether the test turbines can stand up to the power of the bay.

The test turbines will be provided by Minas Basin Pulp and Power and its partner UEK Hydrokinetic Turbine of Maryland; Nova Scotia Power and its partner OpenHydro Turbine of Ireland; and Clean Current Power Systems Inc. of B.C.

Each turbine will cost \$12 million to \$15 million, and company representatives said they would seek government funding from the Sustainable Technology Development Canada program.

The turbine costs are in addition to the \$12 million needed to build the test facility, which is being funded by \$5 million from the province, \$3 million from EnCana Corp. of Calgary and \$4 million from the companies whose turbines will be hooked up to the building.

The facility will be operated by a non-profit organization and will probably be located near Parrsboro. But a turbine probably won't be in the water until 2009. The project must first undergo an environmental assessment, which is expected to be finished this spring, and must complete federal and provincial environmental reviews.

"I believe that this facility and the strategic environmental assessment currently underway will help us understand the role that tidal energy can play in our efforts to protect the environment," Mr. MacDonald said.

"I also believe today is only . . . the first step in Nova Scotia becoming groundbreaking environmental entrepreneurs."

The test turbines will generate three to five megawatts of power, enough to supply electricity to 15 to 25 buildings the size of supermarkets. A commercial project with 200 turbines generating 300,000 megawatts could power 100,000 homes.

"That's one-quarter of the homes in this province that would get their power from this made-in-Nova-Scotia green energy source," the premier said, adding such a project would go a long way to help the province meet and possibly surpass its goal of getting 20 per cent of its electricity from renewable energy sources.

Energy Minister Richard Hurlburt said a commercial operation of that magnitude in the Bay of Fundy "would mean that one million tonnes of greenhouse gases (would be) displaced from our air each year."

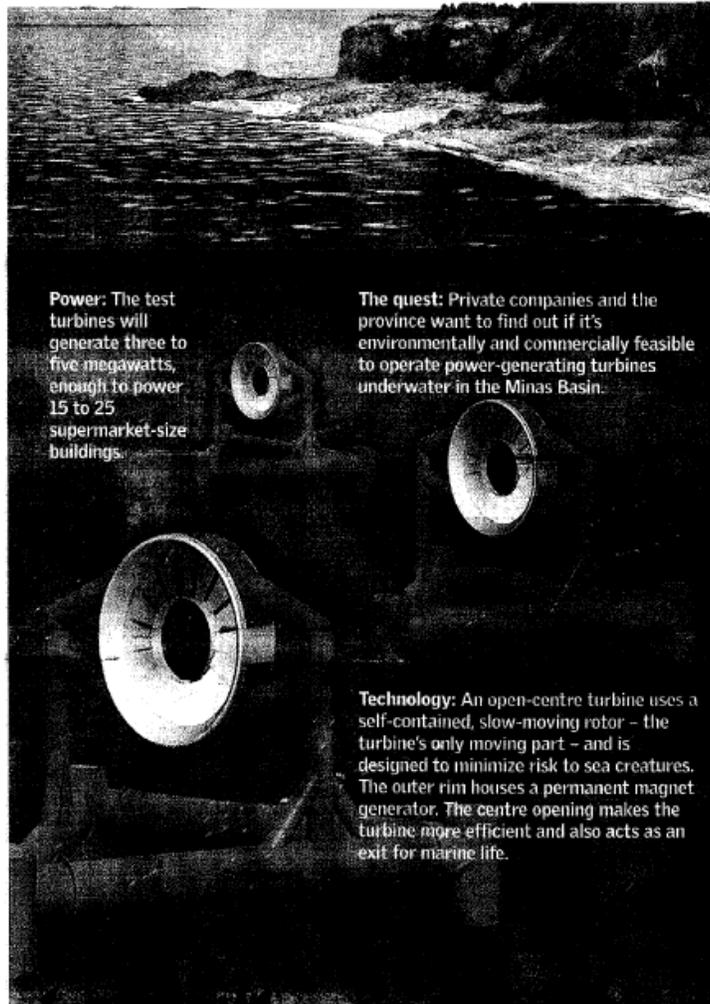
The potential for growth in Nova Scotia's economy is enormous if the province can establish itself as a centre for research, design and manufacturing of in-stream tidal power generation, he said.

EnCana president Gerry Protti said investing in the tidal power test facility was a sound business investment because "we believe in unlocking the value of unconventional energy."

John Woods, Minas Basin vice-president, said his company is anxious to get the test facility built and a turbine into the water.

"We are going to show the rest of the world that we can do it right, here in Nova Scotia, and (that) we do things right in Nova Scotia," he said.

Nova Scotia Power spokesman Rob Bennett said he is pleased the province is testing more than one type of turbine and suggested the project could make Nova Scotia a world leader in tidal power generation.



Power: The test turbines will generate three to five megawatts, enough to power 15 to 25 supermarket-size buildings.

The quest: Private companies and the province want to find out if it's environmentally and commercially feasible to operate power-generating turbines underwater in the Minas Basin.

Technology: An open-centre turbine uses a self-contained, slow-moving rotor – the turbine's only moving part – and is designed to minimize risk to sea creatures. The outer rim houses a permanent magnet generator. The centre opening makes the turbine more efficient and also acts as an exit for marine life.