

## **N.S. has power to harness tides**

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By GORDON DELANEY, Valley Bureau

Nova Scotia has an opportunity to be a world leader in tidal energy in the coming decades, a public forum at Acadia University has heard.

A new technology that the experts are calling in-stream tidal energy conversion is emerging and Nova Scotia has been identified as one of the provinces with potential to harness it.

"This is a new beast...something that has to be looked at on its own merits," said Graham Daborn, director of the Academy of the Environment at Acadia.

The Wolfville campus is where the province's tidal energy program first began. It was proposed by two Acadia professors who had a plan to develop tidal power off Cape Split in 1915. The idea never got off the ground because of lack of financing. But it kept coming back, said Mr. Daborn.

There was a plan to harness the tides in Passamaquoddy Bay in the 1920s. In the 1930s attention shifted to Minas Basin. And in 1985, the first tidal power plant opened in Annapolis Basin at Annapolis Royal.

Climate change and global warming have put the spotlight back on tidal power, along with other forms of renewable energy.

But tidal was the hot topic at a panel discussion Thursday night involving scientists, government agencies, regulators and industry.

"There's a lot of potential in the Bay of Fundy and we're just starting to see it," said Nancy Rondeaux of Nova Scotia Energy.

She said while the tidal energy conversion technology is in its infancy the turbines could be ready for commercial generation beginning in 2013.

The technology harnesses kinetic energy instead of the first generation of tidal technology, which is based on gravity. It has twice the velocity and eight times the power capacity.

Nova Scotia potentially has 4,000 megawatts of overall potential tidal power with the technology. Realistically, about 15 per cent, or 300 megawatts, could be harnessed.

Total peak power demand in Nova Scotia is 2,200 megawatts, so 300 would go a long way toward diversifying power sources and reducing greenhouse gas emissions.

Eight potential sites for the technology have been identified, including Minas Passage, the narrow opening in Minas Basin between Parrsboro and Cape Split. That area alone has capacity to generate about 150 megawatts, or about 50 per cent of the total tidal output, said Ms. Rondeaux.

The technology involves attaching 100 turbines to the ocean floor.

The province, which has said it will give \$250,000 toward studying offshore renewable energy, is proposing an environmental assessment that would examine all data and potential impacts of such a project, said Sandra Farwell, a provincial energy policy analyst.

She said all aspects of the proposal would be considered, including environmental, socio-economic and cultural.

Nova Scotia Power spokesman Terry Toner said the utility is committed to increasing renewable energy sources and is excited about the tidal potential. A demonstration project in Minas Basin would cost about \$12 million, he said.

Mr. Toner said NSP is seeking funding for the project, which, if completed, would be the largest of its kind in the world.

The test project would only harness one megawatt of power but it would allow scientists and industry people to better study the technology and its impacts on the environment.

Les Smith of the Clean Annapolis River Project said the technology must be applied slowly and with environmental stewardship in mind.

Mark Taylor, who fishes scallops and lobsters in Minas Passage, said lobsters go to the area to moult and spawn and he warned against disrupting the lucrative lobster fishery.

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