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Tidal energy companies join forces for Bay of Fundy project | CBC News

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Sustainable Marine Energy and Minas Tidal LP will use a technology that includes turbines on a floating platform — instead of on the ocean floor — with the hope of eventually delivering nine megawatts of tidal energy to Nova Scotia's electricity grid.

Sustainable Marine Energy has been testing its PLAT-I floating

in-stream technology in Grand Passage, N.S., for the last year. (Sustainable Marine Energy)

Two tidal energy companies are joining forces to develop technology to harness the Bay of Fundy's powerful tides.

Sustainable Marine Energy and Minas Tidal LP will use a technology that includes turbines on a floating platform — instead of on the ocean floor — with the hope of eventually delivering nine megawatts of tidal energy to Nova Scotia's electricity grid.

"When you look at the economics of trying to get these first demonstration projects underway, it makes a lot more sense to work as a team to address these challenges and get something in the water," said Jason Hayman, managing director of Sustainable Marine Energy, in a phone interview from Dublin where he is attending the annual Ocean Energy Europe conference.

"It tends to be quite expensive to raise the money because, of course, investors expect higher returns for the higher risk."

Sustainable Marine Energy was given a tidal licence for the Bay of Fundy in July. It allows them to sell electricity to Nova Scotia Power at 53 cents per kilowatt hour, according to a news release from the province.

Project expected to launch next year

Sustainable Marine Energy and Minas Tidal LP have formed a joint-venture company, Spicer Marine Energy Inc., which will

run the Pempa'q In-stream Tidal Energy Project, set to begin next year.

This comes more than a year after another joint venture at the Fundy Ocean Research Centre for Energy (FORCE) ran into financial trouble.

Cape Sharp Tidal Venture, made up of Emera and Irish company OpenHydro, deployed a turbine in the Bay of Fundy shortly before OpenHydro entered creditor protection last summer.

The turbine is still sitting in the Minas Passage and there is no timeline for its removal.

"It is being monitored and it is in a safe state," said Energy and Mines Minister Derek Mombourquette in a statement.

"It's not spinning and there is no impact on the environment or marine life. We are actively pursuing a private-sector solution for retrieval and disposal of the turbine. There has been significant interest from developers."

Hayman said the experiences of the Cape Sharp Tidal Venture are driving design considerations on the project.

The floating system makes repairs easier, says Sustainable Marine Energy's managing director. (Sustainable Marine Energy)

He said the Bay of Fundy poses unique challenges for deploying equipment, but the company has been doing tests of its floating in-stream technology in Scotland and Grand Passage, N.S., and is becoming more efficient. Hayman used the example of changing turbine blades.

"The first time we went to do it, it took a whole day," he said. "Next time we went to do it, it took half a day. Third time the guys went to do it, it took an hour."

He said underwater turbines are expensive to deploy and maintain, but the floating system makes it easier to perform maintenance and reduces costs.

Hayman said it's also more environmentally friendly because not having anything going through the water column means marine animals can go around the turbines more easily.

Ambitious plans

Hayman said the companies hope to put in the first platform in the Bay of Fundy next year. Eventually, there will be three put in altogether, which are slightly larger and will produce 50

times more power than the one in Grand Passage.

Hayman wouldn't disclose the cost of the 15-year project, but the first phase is being paid for by reconcept Group, a Hamburg-based company.