

## **Tidal Power - Critical Choices**

Critical choices lie ahead for the development of in-stream tidal power in this region.

Nova Scotia Power has recently installed an OpenHydro one-megawatt in-stream tidal turbine in the Bay of Fundy near Parrsboro. When it is cabled to the grid this spring Nova Scotia can lay claim to the first commercial-scale, grid connected, in-stream tidal turbine in North America.

Soon thereafter Minas Basin Pulp and Power will install Marine Current Turbines' SeaGen turbine. Alstom and Clean Current will follow suit with their tidal turbine device. At that time there will be over four megawatts of in-stream tidal energy being generated - more than anywhere else in the world.

These plans represent an important and impressive start. They will not, however, automatically result in the early creation of commercial farms of tidal turbines here. Nor will they guarantee that an industry will develop here to support commercialization of ocean renewable energy.

To keep on the tidal energy forefront we will need to keep pace and be competitive with the ever-quickenning plans to harness the tides in the rest of the world.

For instance, Marine Current Turbines, in a joint venture with RWE, plan to install a 10.5 megawatt in-stream tidal energy farm in Wales in 2011. OpenHydro, in partnership with EDF, intend to install a 4-10 megawatt farm in France in 2011. They will also begin fabricating turbines for a 285 megawatt farm with Alderney Renewable Energy in the Channel Islands in this year.

Other leading tidal device developers such as Lunar Energy, Hammerfest Strom, and Atlantis Resources have also formed partnerships with large companies. They too have announced plans that involve significant commercial installations in the next two years.

There are no similar plans to install commercial in-stream turbines in the Bay of Fundy. We have not yet established the necessary policies, processes and incentives that will attract the investors to develop commercial plans for the Bay of Fundy.

Others are more aggressive. The UK has set a target to generate 2000 megawatts of marine renewable energy by 2020. They have also established policies and streamlined regulatory processes that make it clear to investors what the rules are. Further, they have put in place incentives to attract investors - e.g. the Scottish government's incentive for the early stages of commercialization is

the equivalent of 31 cents per kilowatt hour and has attracted 42 applications to develop 700 megawatts of wave and tidal energy in the Pentland Firth.

The cost of these incentives is seen to be offset by the value of the resulting economic activity and the stabilizing effect tidal energy will have on future energy costs.

If we are to become a tidal energy economic hub in Nova Scotia we need to establish tidal energy generation targets, build strategies to achieve the targets, and introduce business case-based investor incentives.

If we follow the examples set by Denmark with wind energy, Germany with solar energy, and now Scotland with ocean energy, we can become a tidal energy leader in North America and beyond. The advantages of clean, reasonably priced energy and a multi-million dollar supporting industry could be ours.

If we let the momentum we have developed fade, industries from other countries will wind up servicing most of our needs. The choice is ours.

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