

# Blue Power

The OREG Newsletter

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## Message from the Executive Director Chris Campbell

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From a meeting of a few like-minded individuals in spring 2004 to a membership close to 100 as 2007 comes to a close - it has been quite a ride.

The advocacy on behalf of the sector has focused on facilitating access to places for the industry to begin to work, ensuring that early initiatives avoid the risks associated with premature commitment to technology choice and raising awareness that the pioneer ocean power projects need access to the same fiscal and financial incentives available to commercial renewables, and indeed more, to create a market-driven sector development.

Nova Scotia's multi-user facility contract is expected in place by the end of the year, with at least three technology providers soon after. Efforts to ensure that British Columbia has a development centre in place by the 2010 Olympics, could strengthen this position.

At the 2007 Fall Symposium in Saint John, the opening session was an opportunity for Irving Oil to announce its plans to evaluate tidal energy options as an option for its customers and for its expanded industrial operations. This, along with previous commitments by Nova Scotia Power and Minas Pulp and Power demonstrates a growing focus by industrial players.

Technology development companies Blue Energy, SyncWave and Wave Energy Technologies have been doing tank tests this year, and Coastal Hydropower and New Energy doing field

trials; as well Clean Current system at Race Rocks, and Finavera deploying AquaBuoy 2.0 in Oregon this fall.

New Energy has found sales applications for several of its prototype-scale generators, vaulting to a position as one of only two ocean energy companies to have manufactured a series of power modules.

These activities, together with developer agreements with international technology providers mean that Canadian projects now have some real technology choices.

One of OREG's efforts, begun in 2006, has been to stimulate sharing and working together by the coastal provinces. New Brunswick and Nova Scotia are collaborating on the tidal Strategic Environmental Assessment. Sharing of policy developments is ongoing. New energy policies in BC, Newfoundland and Labrador (and imminently from Nova Scotia) have all identified the ocean energy opportunities.

This year the group of provinces has formed itself into a National Working Group on Ocean Energy. With representation extending from Newfoundland to the territories, and Quebec. OREG is hoping to work collaboratively toward a coordinated national approach to the development of the sector.

At its essence, the strategy that OREG is pursuing is one of enabling the rapid move to development of experience in deploying and operating ocean power

projects. This means we must find ways to reduce costs and cut the effort necessary to get pilot projects operating - creating facilitated permitting pathways or even permitted sites with shared interconnection infrastructure. I

t means that we must focus on development of an ocean energy project delivery industry - using a supported market to pull electricity sales will mobilise project developers, financiers and technologies, building the industry that will continue to deliver projects right through into competitive commercial stage.

Expect to hear more discussion of regional *feed in tariffs* or *marine renewable obligations*, drawing together rate payer support, existing federal incentives and potentially new provincial and federal financial contributions, as well as carbon offset financial transfers to make pilot ocean energy projects viable.

For 2008? OREG and some government partners hope to provide a Canadian economic analysis supporting a rationale for these proactive initiatives.

As an exciting 2007 closes, Jessica McIlroy, the board and I, thank our members and friends for the support that has allowed OREG to come so far. While we have lots to do, we are so pleased to see the progress that much of our membership has achieved and we commit to continuing to build the enabling environment you need.

## Canadian Industry Update



The EnCurrent Turbine from New Energy Corp.

Natural Resources Canada (NRCan) held the first Ocean Energy Technical Advisory Committee (TAC) meeting on November 20th. NRCan establishes TACs to provide input into strategic planning and direction of R&D within NRCan and other government departments.

This first TAC meeting was attended by approximately 30 people, representing a broad range of the government, industry and academia.

Discussions at the TAC helped establish the goals of the committee and some future activities. Another meeting has

been proposed for the spring in order to further define the TAC members and detailed activities.

The Nova Scotia Strategic Environmental Assessment is moving along. A stakeholder roundtable has been formed provide feedback to the Technical Advisory Group (TAG) from a wide range of perspectives.

The TAG is inviting community-based groups to submit applications for funding for initiatives that (1) help bring to the SEA process views and ideas from stakeholders who might otherwise not participate, or (2) bring new information or approaches to the SEA process through small research projects. Deadline for application is December 15th, for more information see <http://www.bayoffundyse.ca>.

The government of New Brunswick has released an Interim Policy on Allocation of Crown Lands for Research in Support of In-Stream Tidal Power Generation.

The purpose of the policy is to provide interim guidance and direction to the Department of Natural Resources and the public concerning dispositions of submerged Crown land for research to support the future development of in-stream tidal power generation.

Research activities can include data collection and analysis on water currents, climate conditions, baseline data of the natural environment and the behaviour of wildlife, and for evaluating scale models of generation devices through towing, floating and barge tests. The policy can be found [online](#).

*“provide input into the strategic planning and direction of R&D within NRCan...”*

## OREG International Activities

OREG is continuing to pursue international coordination opportunities in order to maintain Canada's position as a world leader in ocean energy and accelerate sector development through collaboration.

The British High Commission organized a UK-Canada Marine Energy Workshop in Ottawa on October 29th and 30th. The event was titled: a bilateral workshop to share best practice and identify opportunities for collaboration in marine energy.

Participants were mainly from testing and research organizations and number of areas for the sharing of information and collaboration on R&D were identified.

OREG will be following up on this workshop and looking to formalize relationships with the

UK, possibly through an arrangement with the British Wind Energy Association. Other collaborations are being investigated, such as a academic connection to the Supergen Marine Energy Research Consortium.

Activities to coordinated the US efforts are also continuing. Through action items developed at last summer's PNWER Summit, OREG is coordinating the formation of a Pacific Ocean Energy Network.

The Network's Executive Committee will consist of representation from Alaska, BC, Washington State, Oregon and California. Once initial activities are developed, there will be participation from the ocean energy community in all these regions.

The immediate goals of the Network are to establish a

discussion forum and communication network to share information on regulatory development, environmental impact studies, resource analysis, policy, testing, and other aspects of ocean energy development.

By learning from each other and working together we hope to prevent unnecessary roadblocks and move the sector forward all along the Pacific coast.

OREG is also involved in a number of upcoming international events. Chris Campbell has been asked to help organize HydroVision 2008 and the International Ocean Energy Conference to be held in France next fall.

OREG will also have a booth at the ACORE trade show at WIREC in Washington DC next March.



The Finavera AquaBuOY deployed off the coast of Oregon.

## Association Activities

On October 25th and 26th, OREG held its annual Fall Symposium in Saint John, New Brunswick.

The event drew approximately 110 participants from the maritime region, across Canada, the US and the UK. Updates on local initiatives, technology and project development activities across Canada and thoughts on the importance of regional business development were presented.

The event was also the forum for four major announcements. The New Brunswick government announced its Interim Policy on Allocation of Crown Lands for Research in Support of In-Stream Tidal Power Generation.

Marine Current Turbines announced the signed of two MOUs with the Canadian pro-

ject development companies Maritime Tidal Energy Corp. and Canoe Pass Tidal.

Irving Oil announced interest in developing a second refinery in Saint John and pursuing the use of proven technology to create one of the cleanest refineries in North America. They will be exploring the opportunities for tidal power in the region and how tidal power could potential integrate into the new facility.

The Saint John even allowed us to continue to build the Canadian ocean energy community by bringing people together a providing a forum for discussion. We look forward to continuing to expand our ocean energy "family" across Canada and are still pursuing the development of an OREG office or representative in the Maritimes.

As we move quickly towards

2008, we are examining our goals for next year and preparing for our membership drive and renewals.

We expect 2008 to be another year of amazing progress in the industry and we are excited to see the new developments and activities.

We hope that you joins us in continuing to expand and diversify the ocean energy sector in Canada by joining OREG or renewing your membership.

While we will represent the industry to our greatest ability, your membership and participation ensures a common message and a unified front to gain the support needed to secure Canada's global leader position.



**MOU signing between BC Tidal Energy Corp. and Marine Current Turbines.**

***"continue to build the Canadian ocean energy community"***

## OREG Member Company Updates

**BC Tidal Energy Corporation** and **Marine Current Turbines (MCT)** signed a cooperation agreement to undertake a project to install underwater tidal turbines in Discovery Passage near Campbell River.

"Discovery Passage and its adjacent marine areas have some of the world's best tidal energy resources" said Thor Peterson, BC Tidal President. "MCT's technology seems a good fit for the tidal current characteristics, ocean depths and promises low environmental impact."

"We believe Canada has the resource, the ocean industry and hopefully a supportive regulatory climate" said MCT Director Joe Verdi." We now have agreements in place with good project development

companies on both coasts"

The agreement between the companies aims to install at least three of the 1.2 MW turbines at appropriate locations near Campbell River, BC.

MCT has also signed an MOU with **Maritime Tidal Energy Corporation** for tidal development in the Bay of Fundy. They have submitted a proposal to the Nova Scotia DOE for the opportunity to test a turbine at the proposed common-user facility.

**Coastal Hydropower** has won an award from the Mid-Island Science, Technology and Innovation Council at their annual awards, held on November 1st. The award was in the category of Environmental Technology.

Member companies **SyncWave**

**Energy and Marinus Power LLC** have announced the signing of an MOU to form a new company, **SyncWave Systems**. The new company has been formed to undergo the commercialization activities of SyncWave's Power Resonator™ and SWELS™ wave energy conversion technologies.

SyncWave Energy will license its technologies to the new company and provide engineering expertise, permits, and project management. A demonstration device is targeting for off the coast of Vancouver Island in late 2009 or 2010.



**Neil Anderson, of Coastal Hydropower, with the MISTIC award for Environmental Technology.**

Member updates continued on next page...

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## Member Company Updates Cont.

**Lunar Energy** and E.ON announced in October plans to construct a major tidal project off the coast of Wales. The companies have submitted a scoping report to the UK Department of Business, Enterprise and Regulatory Reform (formerly the DTI) and other key stakeholders.

They are proposing a "field" of 1 MW turbine units, that would generate enough electricity for 5,000 homes. They have begun the environmental impact assessment work and anticipate operation by 2010/11.

One of our newest member, and newest Ocean Energy Leader, **OpenHydro**, has been successful testing their Open Centre Turbine at EMEC since late 2006.

In early November this year, they exchanged the turbine at the testing site in the Falls of Warness (the EMEC tidal testing location). They are now moving into the next phase of

testing.

**Wave Energy Technologies** has been continuing its prototype development and testing program. After deploying a prototype of the WET EnGen in Sandy Cove, Nova Scotia last year, the company has continued R&D activities and recently tested a device at the NRC CHC facilities in Ottawa.

**Verdant Power Canada** has begun activities for its Cornwall Ontario River Energy (CORE) project. Verdant has brought together a consortium of partners for the project, and has a goal of developing 15 MW of power at the project site.

The NRCan supported RETScreen International Clean Energy Decision Support Centre has recently added

wave, tidal and ocean current energy to its database of information.

RETScreen provides software free of charge to evaluate energy production and savings, life-cycle costs, emissions reductions, financial viability and risk for various types of renewable energy technologies.

The software also include product cost and climate databases and an online manual. The software can be downloaded from [www.retscreen.net](http://www.retscreen.net).



The OpenHydro turbine raised out of the water at the EMEC tidal testing site.

## Upcoming OREG Event

### The next OREG Symposium is planned for May 2008 in Quebec City.

OREG's spring Symposium will focus on the development and use of tidal in-stream turbine designs for all river, man-made channel, tidal current, and other water flows. Many of our members and other companies around the world are investigating the use of this new generation of turbines in all zero or no-head water flow applications. Whether the turbines are used in freshwater or man-made channel systems as a development stage progression step towards marine applications or for localized power, the energy opportunity is enormous.

Please keep an eye on the OREG website and Bi-Weekly news for details on this upcoming event. Please contact us for information on sponsorship or speaking opportunities.

*The Ocean Renewable Energy Group (OREG) aligns industry, academia and government to ensure that Canada is a leader in providing ocean energy solutions to a world market.*