



OCEAN RENEWABLE ENERGY COALITION

EBB AND TIDE NEWSLETTER



December 2011 Newsletter

View from the Bridge

by Sean O'Neill



\$59 million for the DOE WaterPower Program with \$34 million for MHK in Fiscal Year 2012! That's an amazing way to close out this year. With 2011 coming to an end we've seen tremendous progress here in the U.S. and abroad with projects deployed in test tanks and the natural environment with data being gathered to support future commercial efforts. 2012 promises to be even better with more projects being deployed in Florida, Maine, Massachusetts, North Carolina, New York, Oregon and Washington State.

Special thanks to the folks at SMI--Damian, Paul, PJ, and Jessica for their tremendous efforts on everything from the U.S. MHK Roadmap to successful legislative initiatives this year. Dr. Bob Thresher, from the National Renewable Energy Lab; John Bonds, energy and finance consultant; Richard Chwaszczewski, SAIC; and Carolyn Elefant all provided service well above and beyond the call of duty.

You will also see in this edition of Ebb & Tide the announcement of Neil Rondorf and Bill Staby as the new Chairman of the International TC-114 and the new Head of the U.S. Delegation and Technical Advisor to the U.S. TAG, respectively. Neil and Bill have demonstrated great leadership in the development of technical specifications and standards through TC-114. This important initiative will lay the groundwork supporting the technical progress and financing of MHK projects. If your not involved in TC-114 join today. Contact Bill Staby at: wstaby@resolute-marine-energy.com



Counsel's Corner

By Carolyn Elefant

The Impact of FERC Order No. 1000 on MHK

Back in July 2011, FERC issued a landmark ruling, Order No. 1000 which requires utilities to include provisions for transmission planning and cost allocation within their open access transmission tariffs on file at FERC. Significantly, Order No. 1000 allows transmission planners to take state and federal public policy into consideration when planning transmission. Prior to Order No. 1000, transmission planners traditionally decided to expand transmission based on economic need or reliability considerations. But now, planners may also consider, for example, whether a state has a renewable portfolio standard (RPS) which would require import of renewables from another region and necessitate additional transmission.

Order No. 1000 was intended to spur renewable development by creating incentives for construction of transmission to transport wind power from middle-America to other parts of the country. However, for the marine and hydrokinetic industry (MHK), Order No. 1000 is a mixed bag. One of MHK's most compelling features is that it exists close to load, thus obviating the need for extensive transmission. Coastal states would rather have ratepayers' dollars go towards support of indigenous MHK projects, rather than to pay for transmission to import other renewables.

Sixty-two parties sought rehearing of Order No. 1000, many seeking additional clarity on the public policy provision. For example, must a state's public policy always be used as a basis for supporting expansion of transmission? If a state manifests a desire to develop indigenous MHK resources to meet its RPS obligations, shouldn't that policy militate against investment in transmission? Although none of the parties in the Order No. 1000 proceeding (OREC did not participate) identified the specific issue of MHK, there is considerable discussion of the tension between developing renewables at home versus developing transmission to import renewables from another region. Hopefully, FERC's decision on rehearing will offer more guidance on this matter. OREC will keep you posted on the outcome.

Enjoy the holiday season and best wishes for a Happy New Year. Seas the day!

Legislative Update

By Damian Kunko



All of our hard work this year paid off when we learned that we were successful in securing \$34 million in the DOE Marine and Hydrokinetic

[Join OREC Today!](#)



Upcoming Events

[Hamburg Offshore Wind Conference](#)

Hamburg, Germany - February 7 & 8, 2012

[Renewable UK Wave and Tidal Conference 2012](#)

Edinburgh, Scotland - March 15, 2012

[RenewableUK Wave and Tidal Conference 2012](#)

Edinburgh, Scotland - March 15, 2012

[Global Marine Renewable Energy Conference](#)

Washington, DC - April 24, 25 & 26, 2012

[ICOE 2012](#)

Dublin, Ireland - October 17 - 19, 2012



(MHK) R&D budget – a threefold increase from FY11. The U.S. Congress on December 15 agreed to a FY12 Omnibus appropriations package that includes \$59 million for DOE's Water Power R&D program. Of this \$59 million, \$34 million is for Marine and Hydrokinetic R&D and \$25 million is for conventional hydropower R&D. Out of the \$59 million, \$10 million is specifically for building infrastructure at the National Marine Renewable Energy Centers.

This FY12 \$59 million Water Power R&D budget is \$29 million above the President's Budget Request and is the only DOE Renewable Energy program that received an increase.

With the FY12 appropriations process complete, we expect a DOE Funding Opportunity Announcement next year.

Comprehensive energy policy stalled this year, and there are still efforts underway led by a coalition of renewable energy trade associations to extend energy tax provisions, including extending the construction start deadline to qualify for the 1603 credit and an extension of the renewable energy Production Tax Credit. OREC's main focus related to tax policy is to secure five-year depreciation language and full Production Tax Credit on par with other renewable energy technologies, instead of the half-credit currently provided to MHK. We will continue to take advantage of any available opportunities to ensure that MHK receives the same, if not better, tax subsidy supports for similar renewable energy projects.

When Congress returns in the New Year, OREC will continue to work with our supporters in the House and Senate to include the Marine and Hydrokinetic Renewable Energy Promotion Act (H.R. 2994 and S. 630) in any larger package of energy legislation. The MHK Renewable Energy Promotion Act would authorize DOE's MHK technology R&D program, provide for continued construction of national MHK test centers, and would fund an adaptive management plan and device verification program. Please feel free to contact our lobbying team at SMI/Helios Strategies with any questions or if you need any additional information.

\$59 Million for FY 12 DOE Water Power R&D Program

December 19, 2011 - **MHK to receive \$34 million for research, development and demonstration**

President Obama is expected to sign into law this week the Fiscal Year (FY) 2012 omnibus appropriations measure, which was passed by the House and the Senate. The appropriations measure combines the nine remaining spending bills, including the Energy and Water bill, and has garnered large bipartisan support.

Read more:

http://www.electricenergyonline.com/page=show_news&rss=1&id=162529



The 5th Annual Global Marine Renewable Energy Conference returns to Washington, DC on April 24, 25 & 26 of 2012.

Registration is open for the 5th Annual Global Marine Renewable Energy Conference. Take advantage of the Super Early Bird Rate by signing up by December 31, 2011. Stay tuned for this year's line-up.

Do you have a panel, presenter, or topic you want to see at the 5th Annual GMREC? Send your ideas to info@globalmarinerenewable.com.

Sponsors, exhibitors, and posters are welcome.

More info can be found at www.globalmarinerenewable.com.

IBM's Top 5 Technology Predictions for the Next 5 Years include Tidal and Kinetic Energy: People Power

Imagine generating electricity from routine motions around you -- using the tides to run power plants, or charging your cellphone battery by plugging it into a tiny generator attached to a wheel of your bicycle. It's kinetic energy.

<http://news.yahoo.com/ibms-top-5-technology-predictions-next-5-years-210605647.html>

Member News



Neil Rondorf of SAIC and Bill Staby of Resolute Marine Energy

OREC Members Leading the Way with TC-114

Neil Rondorf of SAIC has served as the head of the U.S. Delegation and the Technical Advisor to the U.S. Technical Advisory Group (TAG) to TC-114 since 2006 and has just been appointed as the new Chairman of the International TC-114. Bill Staby of Resolute Marine Energy was voted in as Neil's replacement as Head of the U.S. Delegation and Technical Advisor to the U.S. TAG. Congratulations to both and Thank You, both, for your continued dedication and contributions to the industry.

The International Electrotechnical Commission (IEC) develops and publishes international standards for all electrical, electronic and related technologies – collectively known as "electrotechnology." IEC standards cover a vast range of technologies including power generation, transmission and distribution; home appliances and office equipment; semiconductors, fiber optics, batteries, nanotechnologies and solar energy. You can read about the U.S. participation in the MHK Committee--Technical Committee 114--in their newsletter or on their website: <http://www.tc114.us> or visit the IEC website at: <http://www.iec.ch>

If you, or your company, are not involved in TC-114, get involved today. Contact Bill Staby at wstaby@resolute-marine-energy.com

TC-114 Terminology Committee 1st to Publish

Technical Specification IEC TC 62600-1--Terminology was recently published by the International Electrotechnical Committee. This Tech Spec is the first to come out of TC-114 dedicated to writing standards for the MHK industry.

The Terminology Committee, chaired by Ghanashyam Ranjitkar of Natural Resources Canada (NRCAN) is the first of several committees to publish a technical specification. U.S. members of the committee are Phil Beauchamp of GE, Dave Tietje of SAIC, and Sean O'Neill of OREC.

The standards work for design, resource assessment and device performance are progressing well. If anyone is interested in getting involved in this vital work to advance the industry please contact Bill Staby at wstaby@resolute-marine-energy.com

IEC TC 62600-1 Terminology is available at the IEC webstore:

http://webstore.iec.ch/webstore/webstore.nsf/ArtNum_PK/45880?OpenDocument

Under-sea energy Network "Possible"

A sub-sea renewable energy grid connecting Scotland, Ireland and Northern Ireland is "viable and competitive", according to a study.

The report was published as government ministers from the three countries met to discuss the proposal in Glasgow.

Read more:

http://www.thesouthernreporter.co.uk/news/under_sea_energy_network_possible_1_1980725

Evolution of tidal turbines imminent

While it is too early to talk about first and second generations, the tidal turbine is beginning to evolve. Sector leader Marine Current Turbines' craft, Seagen, is likely to look rather different in a few years' time.

Peter Fraenkel, the turbine's designer and company Chief Technical Officer, envisages a third rotor within three years and 20 metre diameter rotors within four (compared to 16 metres now). This, he calculates, will raise the power produced by the turbine to 3.2 MW, an increase of over 125%.

Read More:

http://social.tidaltoday.com/industry-insight/evolution-tidal-turbines-imminent?utm_source=TidalToday%2BNewsletter%2B2112&utm_medium=E-Brief%2B2112&utm_campaign=Tidal

EPRI Completes Three DOE Studies

EPRI recently published three reports related to ocean renewable energy. The projects were funded by DOE. All three can be downloaded by inserting the 7-digit report ID in the search window in the upper right corner of the home page at [EPRI.com](http://www.eprinet.com).

- EPRI (Electric Power Research Institute). 2011. Fish Passage Through Turbines: Application of Conventional Hydropower Data to Hydrokinetic Technologies. Palo Alto, CA. Report # 1024638. October 2011.
- EPRI (Electric Power Research Institute). 2011. Evaluation of Fish Injury and Mortality Associated with Hydrokinetic Turbines. Palo Alto, CA. Report # 1024569. November 2011.
- EPRI (Electric Power Research Institute). 2011. Mapping and Assessment of the United States Ocean Wave Energy Resource. Palo Alto, CA. Report # 1024637. November 2011.

For more information, contact Paul Jacobson, EPRI Waterpower Program Manager:
pjacobson@epri.com

Alden Lab looks for better ways to protect fish near hydroelectric projects

(Telegram; Nov 20, 2011)

Imagine a green technology, such as generating power out of water and gravity. Imagine it greener, and you may be an engineer at Alden Research Laboratory Inc. Hydroelectricity would be more environmentally friendly — and more practical, in more locations — without the need to construct massive dams and reservoirs.

Read more: <http://www.telegram.com/article/20111120/NEWS/111209946/1002/business>

In Depth: Turning a twin-corkscrew turbine into "beautiful" reality

(ReCharge News; Nov 23, 2011)

The first of Flumill's twin-corkscrew tidal-power turbines is now turning at the European Marine Energy Centre (Emec) testing site off Scotland's Orkney Islands, having gone from drawing board to deployment of a full-scale prototype in less than 15 months.

Read More: http://www.rechargenews.com/energy/wave_tidal_hydro/article289824.ece

M3 tests wave technology

Corvallis-based M3 Wave Energy Systems debuted its power-generating technology last week at the [Hinsdale Wave Research Laboratory](#) at Oregon State University.

Read more: http://www.sustainablebusinessoregon.com/articles/2011/12/m3-tests-wave-technology-seeks-funding.html?surround=etf&ana=e_article

Secretary of Commerce Receives Recommendations from Key Stakeholders Convened as part of RE&EE Export Initiative

September 14, 2011

The first of many Advisory Committees enacted to meet the Administration's plan for a

Renewable Energy and Energy Efficiency (RE&EE) Export Initiative to achieve its goal of doubling renewable energy exports in the next five years, targeting \$10 billion or more in annual export benefits, came forward with key recommendations vital to enact to ensure robust growth in the renewable energy and energy efficiency industries. Trey Taylor, Verdant Power, Co-founder & President represents the MHK industry. Trey's continued leadership and insight continues to set the stage for a robust global trading market in MHK technologies.

To view the complete recommendations, go to: http://export.gov/reee/eq_main_023040.asp.

Ocean Power Technologies to Showcase Technology Innovation in Spain

October 24, 2011

Ocean Power Technologies, Inc., a leading wave energy technology company, is pleased to announce the launch of a new technology initiative to enhance the efficiency of the Company's patented PowerBuoy wave energy systems under the Company's existing "WavePort" project.

The new system will assess the characteristics of each incoming wave before it reaches the PowerBuoy wave power station, thereby providing more time for the electronic tuning capability to react. It is expected that this will significantly boost the power output of the PowerBuoy and reduce cost per megawatt hour of energy produced.

OPT was awarded \$3 million under the WavePort Project, an initiative of the European Union's Seventh Framework Program for research and innovation. With the commencement of efforts under the WavePort program, OPT has added these funds to its order backlog. See oceanpowertech.com for further information.

New Report Released by Yale Project on Climate Change Communication, "Public Support for Climate and Energy Policies in 2011"

November 29, 2011

Two highlights from the report, which can be viewed in full [here](#):

- 90 percent of Americans say developing sources of clean energy should be a very high (30%), high (35%), or medium (25%) priority for the president and Congress, including 82 percent of registered Republicans, 91 percent of Independents, and 97 percent of Democrats.
- 54 percent of Americans say that a candidate's views on global warming will be either the "single most important issue" (2%) or "one of several important issues" (52%) in determining their vote for President next year, including 39 percent of registered Republicans, 55 percent of Independents, and 65 percent of Democrats.

Obama taps ARPA-E director for Energy undersecretary

November 29, 2011

The leader of the Energy Department's innovative energy technology research program is getting a promotion. President Obama this afternoon formally announced his intent to nominate Arun Majumdar -- the current director of the Advanced Research Projects Agency-Energy, or ARPA-E, to head up all the agency's applied energy and environmental research programs.

As undersecretary of Energy, Majumdar would oversee some of the agency's most prominent

programs, including the offices of Energy Efficiency and Renewable Energy, Fossil Energy and Nuclear Energy, among other programs.

For the past two and a half years, Majumdar, a mechanical engineer and former academic, has helped mold ARPA-E, the fledging high-risk, high-reward research program. The program, which funds cutting-edge research that the private sector could consider too risky, to date has invested more than \$520 million to 180 projects. Read the full story [here](#).

Clean Energy Funding to Drop After Obama Grant Program Ends

November 30, 2011

U.S. financing for renewable energy will drop next year after the expiration of a grant program that backed at least \$32.9 billion in projects, one of President Barack Obama's most ambitious efforts to support the industry.

The program, which ends Dec. 31, encouraged companies including Google Inc. and Citigroup Inc. to take equity stakes in wind and solar projects. It paid out \$3.3 billion last year, about a 10th of the \$34 billion invested in clean energy in the U.S., and provided \$9.6 billion since 2009.

Read the full story [here](#).

OREC Newsletter Exclusive: Resolute Marine Energy Completes Ocean Deployment at Jennette's Pier in Nags Head, NC

December 5, 2011

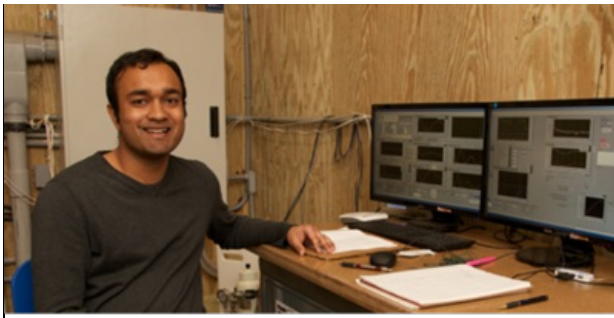
On December 5th, Boston-based Resolute Marine Energy successfully deployed a test version of its surge-type wave energy converter at Jennette's Pier in Nags Head, North Carolina (www.jennettespier.net). "Our test WEC and experiment plan is designed to help us better understand the interplay among a number of parameters having to do with both WEC design and the specific site where the device is being deployed" said RME CEO Bill Staby. Staby continued, "We're very pleased with the great facilities at Jennette's Pier and the technical and logistical support we've received from the University of North Carolina Coastal Studies Institute (UNC-CSI) and the owner/operator of the pier, the North Carolina Aquariums Society." More information regarding Resolute Marine Energy can be found on their website: www.resolutemarine.com.



Resolute Marine Energy's Ocean Deployment at Jennette's Pier in Nags Head, NC



North Carolina Aquarium Society's Display at Jenette's Pier Aquarium.



RME Engineer Eshwan Ramudu in Control Room on Jennette's Pier



Divers await as RME's SurgeWEC is deployed off Jennette's Pier

Coastal Studies Institute dives into ocean energy

(Outer Banks Voice; Nov 16, 2011)

Leading experts have zeroed in on the Outer Banks as a prime testing spot to see if it's possible to harness energy from waves, currents and tides. In its second year, the project is part of five-year program initiated by the North Carolina General Assembly, which provided \$2 million in 2010

Sale of Eastport Boat School Completed

December 6, 2011

The land, pier and buildings associated with the Eastport Boat School have been sold to Perry Maine and Construction for \$300,000. The 17-acre site at 16 Deep Cove will be converted into a facility that will build tidal turbines being developed by Ocean Renewable Power Company.

Read more: <http://bangordailynews.com/2011/12/06/business/sale-of-eastport-boat-school-completed/>

Ocean Renewable Power Company Submits Preliminary Permit Applications to Federal Energy Regulatory Commission

December 8, 2011

Ocean Renewable Power Company (ORPC) announced today that it has submitted two new preliminary permit applications to the Federal Energy Regulatory Commission (FERC) for sites in the vicinity of the Lubec Narrows and Treat Island. ORPC's two new preliminary permit applications may be accessed online at www.ferc.gov/docs-filing/elibrary.asp (Docket Numbers P-14331 and 14330).

Industry Updates In Brief

US

- **METAP Webinar**

National Laboratory Activities to Support Marine Energy Technology Progress. On January 12, 2012, Clean Energy States Alliance will host a webinar to explore the National Laboratories' support activities for marine hydrokinetic technologies (MHK). This webinar is designed as a briefing for MHK stakeholders by representatives from the Pacific Northwest National Laboratory (PNNL), Sandia National Laboratory, and the National Renewable Energy Laboratory regarding their major activities and research to support marine energy commercialization and deployment. [Register now.](#)

Director's Fellowship

View NREL's [Research Participant Program Video](#) on YouTube.

The NREL Director's Fellowships are designed to attract the next generation of exceptionally qualified scientists and engineers with outstanding talent and credentials in renewable energy research and related disciplines. Candidates must be a recent PhD graduate (within 3 years of completion), and demonstrate a promising career of leadership and research.

Annually, up to two applicants will be selected based on eligibility, program expectations, applications, and research proposals. Overriding consideration, when evaluating the application, will be the quality of the candidate. Successful candidates will serve a two-year term, with a possible third year renewal (maximum three year-

appointments). The Director's Fellowship includes a premium salary rate, additional funding for conferences/presentations, competitive benefits package, and relocation (for moves greater than 50 miles from NREL).

[California Permitting Guidance for Ocean Renewable Energy Test and Pilot Projects - PDF](#)

- o The California Ocean Protection Council, in consultation with the California Marine Renewable Energy Working Group, is providing this guidance to support the state's long-term energy and carbon reduction goals, particularly the development of experimental wave, tidal and offshore wind energy technologies.
- o The purpose of this paper is to provide license and permit processing guidance for early test and pilot hydrokinetic and offshore wind projects located in and adjacent to California marine waters. This guidance can help project proponents prepare for and meet anticipated regulatory requirements by providing a level of certainty about the review and issuance process of state permits for these types of projects.
- o More information about OPC and partner efforts on ocean renewable energy can be found on the [Wave Energy Development page](#).

[Abstract: The importance of flow and turbulence characteristics for hydrokinetic energy development on the Tanana River at Nenana, Alaska](#) (Journal of Power and Energy; Nov 7, 2011)

The site selection for the installation of hydrokinetic devices along a river reach is an issue of fundamental importance. While it is acknowledged that multiple factors such as accessibility, navigation, safety, and hydraulics, among many others, must be considered in the final decision, this article focuses on the influence of river morphology on turbulence flow parameters.

[Ocean advisory group maps out what works for Oregonians and Oregon's coast](#) (Oregon Live; Nov 19, 2011)

Oregon's Ocean Policy Advisory Council plans to reveal for the first time draft maps that will determine where wave energy buoys may, and may not, be sited. The maps come after three years of meetings between state agencies and ocean stakeholders and take into consideration a myriad of factors, such as fishing grounds, ecologically sensitive sites, existing uses, and yes, just exactly what we want to see when we cast our eyes out to sea.

[Canadian renewable energy poised for growth](#) (Area Development; 2011)

With an abundance of offshore and inland marine resources, Canada is also poised to be a worldwide leader in marine energy. Natural Resources Canada and Fisheries and Oceans Canada are now engaged in research to identify and understand the potential effects of marine energy on the environment, and determine how best to harness this renewable resource.

[Alaska's untapped potential](#) (Hydro World; Nov 29, 2011)

High energy costs, abundant resources and a strong standard for renewable generation in the state of Alaska have created a wealth of opportunity for hydro developers. The state is home to more than 365,000 miles of rivers and 33,000 miles of coastline, making it an epicenter for hydropower development in the US.

[Mixed bag for global cleantech in 2012 predicts consulting & analysis firm Kachan & Co.](#) (PR Web; Dec 01, 2011)

The amount of venture capital entering cleantech will decline in 2012 for the first time since the global economic downturn in 2008, according to cleantech analysis and consulting company Kachan & Co. The firm, with offices in San Francisco, Toronto and Vancouver, has [published a set of predictions for the cleantech sector in 2012](#).

UK

[Wave power array to get real-world test](#) (Earth Techling; Nov 14, 2011)

Another wave power generator is making its way to the European Marine Energy Centre (EMEC) in Orkney, Scotland. Following its testing in Leith, near Edinburgh, ScottishPower Renewables' new P2 Pelamis wave power device took a two-day oversea journey to join a similar machine, installed at the EMEC last year by E.ON. The two P2 Pelamis machines will undergo further testing in tandem, allowing the companies to better understand how an array of devices would operate under real-world conditions.

[1 MW prototype for Kawasaki Tidal Project](#) (Hydro International; Nov 15, 2011)

Tidal energy experts from GL Garrad Hassan are aiding Kawasaki Heavy Industries, Japan, in the development and deployment of its 1 MW prototype tidal turbine by providing technical information and guidance on tidal resources and technologies.

[Isles agree wave power deal which may bring future benefits to community](#) (The Shetland Times; Nov 16, 2011)

Shetland has signed a deal with the giant power company Vattenfall, which might one day see the community part-owning lucrative wave farms around the islands.

[Inverness firm hands over the world's first full life wave power plant](#) (Inverness Courier; Nov 17, 2011)

Voith Hydro Wavegen, the Inverness-based marine energy company, has cause to celebrate after successfully handing over the world's first full life wave power plant into commercial operation.

[Investment continues to flow into marine energy: Siemens and OpenHydro ride the tide](#) (Renewable Energy World; Nov 17, 2011)

The International Energy Agency estimates that marine resources could feasibly provide 20,000 TWh of electricity each year. That's more than today's entire global generation portfolio. But the engineering challenges for technology developers are immense.

["Sea snake" energy firm Pelamis seeks strategic partner](#) (Scotsman; Nov 19, 2011)

Renewables firm Pelamis Wave Power is searching for a "strategic partner" that will allow it to become a large-scale manufacturer of marine energy devices. The Leith-based company, known for its "sea snake" technology, announced in September that it

had hired Ernst & Young to conduct a review of the business and to explore growth options.

[Scotland's tidal energy industry surges to global forefront](#) (Oil Price; Nov 22, 2011)

Inverness-based Wavegen announced that it has sold an array of 16 turbines to the Ente Vasco de la Energia, the Basque Energy Board in Spain for \$1.58 million. On 18 November President of the Basque Country Patxi Lopez inaugurated the Mutriku tidal power facility.

[In Depth: MeyGen eyes 400 MW tidal project in Hell's Mouth](#) (Recharge News; Nov 23, 2011)

MeyGen is one of the few tidal-energy developers that would refer to a 20 MW installation as "a good start". But for the consortium formed by generation company International Power, investment bank Morgan Stanley and technology developer Atlantis Resources, that capacity is just the first phase of a project targeting a nearly 400 MW build-out in the racing waters of the Pentland Firth, aka Hell's Mouth, off Scotland's north coast.

[Pioneering tidal device to harness Humber energy](#) (Yorkshire Post; Nov 30, 2011)

A crane barge maneuvers on the choppy waters of the river Humber at the start of work to install a pioneering green power generator. The Neptune Proteus, a tidal stream power device designed for shallow, estuarine waters, will be secured just off the Deep aquarium in Hull in the coming weeks.

[GSK wins tidal contract](#) (Montrose Review; Nov 30, 2011)

Glaxosmithkline (GSK) has been granted a tidal energy contract by the Crown Estate as the first step towards generating its own green energy for its Montrose factory. The company beat three other bidders to win the contract, which was awarded in the latest round of license allocations.

[Power companies charmed by the Pelamis "sea snake"](#) (Renewable Energy Magazine; Dec 01, 2011)

Wave energy developer Pelamis is riding on the crest of a wave after it was announced last month that Vattenfall is joining ScottishPower and E.ON in buying its cutting-edge wave energy converter, which looks like a 180-meter long snake. On 16 November, the Shetland Times reported that Shetland, an island off the north coast of Scotland, had signed a deal with Vattenfall, which could lead to the community part-owning lucrative wave converter arrays around the islands.

[Wave power industry celebrates accomplishments at Tidal Energy Summit](#) (Hydro World; Dec 2, 2011)

Winners of the 2011 Tidal Today Awards were announced at the International Tidal Energy Summit that took place Nov. 21-23 in London. The awards, in their second year, are designed to "recognize and to reflect the hard work, talent and potential in bringing to fruition real products and real advances in tidal energy," according to a release.

[The 2011 marine winner – Snapper](#) (The Engineer; Dec 2, 2011)

Comparing wind with wave, the fluid you're dealing with is much more dense and there is much more energy to capture in the same sort of volume of fluid,' said Paul McKeever of the National Renewable Energy Centre (Narec), a research organization that supports fledgling renewables technologies, particularly in the marine sector. 'In some ways, that's an advantage, but also a different challenge.

Taiwan

[University unveils Taiwan's first submerged tidal current generator](#) (Focus Taiwan; Nov 14, 2011)

A local college on Monday unveiled the first submerged tidal current generator in the country, which it said marked an important step forward in Taiwan's efforts to harness tidal energy resources. The tidal energy generator developed by National Taiwan Ocean University has completed frequency and efficiency tests inside the world's third largest cavitation tunnel at the school, the research team said.

Ireland

[Ireland's OpenHydro and Imperative Energy scoop awards](#) (Silicon Republic; Nov 15, 2011)

Dublin hosted the Global CleanTech Cluster Awards last night, when 30 finalists from all over the world congregated in the capital city to vie to win the 10 later stage awards and catch venture capitalists' attention. The two Irish finalists – OpenHydro and Imperative Energy – won in their respective categories, reflecting how Ireland is fast becoming the clean-tech capital of Europe.

[UCC to run €9m wave energy trials](#) (Irish Times; Dec 1, 2011)

The European Commission has appointed leading Irish ocean energy researchers to co-ordinate a €9 million test program aimed at accelerating development of marine renewable energy technology. The Europe-wide program will be run by University College Cork's hydraulic and maritime research centre, which has pioneered wave energy potential for many years.

[Crown Estate eases investment path for marine power](#) (Business Green; Dec 1, 2011)

Small companies hoping to tap into the UK's nascent marine sector are to be given a boost in the new year under a new initiative proposed by the Crown Estate. The organization responsible for the seabed confirmed this week that it will significantly reduce the level of parent company financial guarantees it requires from wave and tidal customers from January 2012.

France

[France to complete world's largest tidal energy plant in 2010](#) (Wired; Nov 16, 2011)

From Summer 2012, the French coast near Paimpol-Bréhat in Brittany will be home to the world's largest tidal energy plant. The project, which was originally conceived in 2004 and began construction in 2008, will provide power for up to 4,000 homes in the area, costing somewhere around €40 million.

Australia

[Waves may be future of SA power generation](#) (ABC News; Nov 29, 2011)

A floating structure to generate electricity from wave power will be tested off the west coast of South Australia. The Wave Rider is 110 meters long and 13 meters wide and will float about 800 meters off Elliston on Eyre Peninsula. It generates power by harnessing the kinetic energy of waves pushing against a series of buoys.

[BioPower Systems awarded \\$5 million from Victorian government](#) (PR Newswire; Nov 30, 2011)

Ocean energy company, BioPower Systems (BPS), today announced that the Victorian Minister for Energy and Resources has awarded the company conditional funding support of \$5 million under the Sustainable Energy Pilot Demonstration Program. The funding will be applied towards the \$14 million pilot demonstration of the company's 250 kW bioWAVE ocean wave energy system at a grid-connected site near Port Fairy, Victoria.

[Carnegie Wave Energy to raise A\\$4m for CETO technology demonstration project](#) (Proactive Investors; Dec 01, 2011)

Carnegie Wave Energy will raise up to A\$4 million via a share purchase plan (SPP) to fund working capital purposes during the commercial demonstration project phase of its CETO wave energy technology. Carnegie is the owner and developer of the CETO Wave Energy Technology intellectual property.

[Want to sign up for the OREC Newsletter? Sign up here.](#)

Interested in more news on Marine Renewable on a daily basis? Visit here to view and follow the [Marine Renewables Daily](#), an aggregation of news, videos and blog posts via Twitter. Also check out Carolyn's long running [Renewables Offshore Blog](#).

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