

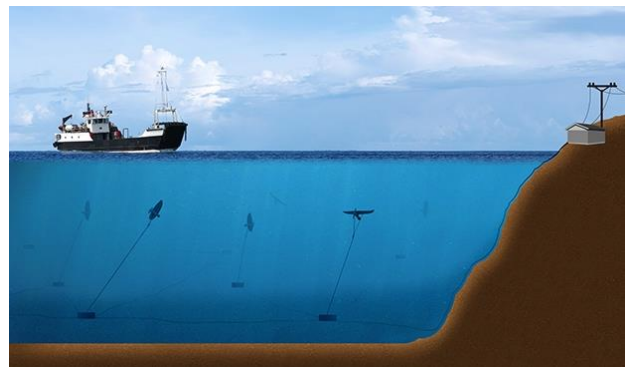
Dear Pro-Tide Environmental Aspects Group Members,

After a busy autumn of workshops, meetings, and conferences, we are happy to share the final edition of the Pro-Tide EAG newsletter. In addition to the usual news and updates, we've added some notes on future funding opportunities to build on the outcomes of Pro-Tide, and attached our final workpackage report.

Autumn News Roundup

Minesto AB fully funds Deep Green Tidal Technology

After applying for listing of company shares on First North at NASDAQ Stockholm, Minesto AB has announced that it has raised US\$17.2 million from more than 2,500 new shareholders. The planned first day of trading of Minesto's shares will be November 9th. The money raised ensures that Minesto's Deep Green tidal technology program is fully funded. Any further proceeds will be used towards the company's commercial phase. A 1/4 scale Deep Green test device is currently deployed at a demonstration site in Strangford Lough, Northern Ireland. A full scale project is scheduled for installation in 2017 at the Holyhead Deep, Wales, UK.



Artist's impression of Minesto's Deep Green device. From www.minesto.com/deep-green

Interest in a Chinese marine energy test centre grows

The European Marine Energy Centre (EMEC) and the University of Edinburgh have signed a memorandum of understanding (MoU) with the Ocean University of China, Qingdao National Laboratory for Marine Science and Technology, and Qingdao Songling Power Environmental Equipment Company. The MoU is intended to encourage knowledge sharing and fundamental research to establish a wave energy test site in Qingdao.

Tidal power plant successfully installed in Eastern Scheldt storm surge barrier

Dutch company Tocardo Tidal Turbines have successfully installed five tidal turbines in the Eastern Scheldt (Oosterschelde) storm surge barrier, in partnership with Huisman, who designed, built, and financially supported the suspension structure for the turbines. The installation is the largest tidal energy project in the Netherlands, and currently the largest commercial installation of turbines in an array. The province of Zeeland, a Pro-Tide partner, provided a substantial financial contribution to the project, demonstrating the importance of the renewable energy resource this project will provide.



Installation of five turbines in progress at the Eastern Scheldt Barrier. From www.pro-tide.eu.

Investing in Opportunities



This project has received European Regional Development Funding through INTERREG IV B.



INTERREG IVB

US company ORPC scopes new projects in Europe



ORPC's TideGen unit being readied for installation at Cobscook Bay, Maine. From www.orpc.co.

The Ocean Renewable Power Co. (ORPC) has secured funding from the Sustainable Energy Authority of Ireland (SEAI) to explore tidal energy sites around the Irish coastline. ORPC currently operates two devices: the 95 kW RivGen device designed to be deployed on riverbeds (max. power at 3.5ms^{-1}), and the seabed-fixed TideGen device, designed to generate up to 600 kW from tidal current flows. Deployments to date have shown the ORPC turbines to fish friendly, with minimal impact on migratory fish such as salmon.

Swansea Bay Tidal Lagoon construction delayed



Artist's impression of Swansea Bay Tidal Lagoon. From www.tidallagoonswanseabay.com

The UK government has delayed agreement on subsidies with Tidal Lagoon Power, the developer behind the Swansea Bay Tidal Lagoon, delaying planned civil construction works at the site until autumn 2016. Tidal Lagoon Power claims that costs of tidal lagoon development will decrease as other planned lagoons across Wales are built. The UK government is reviewing the figures for all of the planned lagoons in tandem. Planning consent for the development was granted in June of this year, and marine construction works are expected to commence in spring 2017, with first power generation in 2021.

Offshore electricity grid and marine renewable energy: new reports published

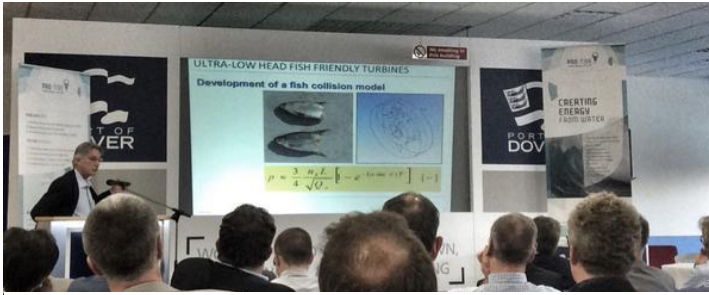
The final reports of the Irish-Scottish Links on Energy Study (ISLES) have been published online at <http://www.islesproject.eu/final-reports-published-and-available-to-download>.

ISLES focussed on strategic approaches to consenting future offshore wind, wave, and tidal generation projects, and was funded by the EU's INTERREG IVA Programme. The final reports include a cross-jurisdictional marine spatial plan providing guidance for potential developers, a recommended regulatory model for coordinating developments, and a business plan and governance framework for future developments.

Pro-Tide Final Conference

Nearly 100 delegates attended the Pro-Tide final conference last month. Dover Harbour Board hosted the delegation, which comprised of two days of presentations, networking, and discussion summarising the outcomes of the Pro-Tide project.





Jacob Arnold presents his fish collision model to delegates in Dover. The Pro-Tide team welcomes delegates to the conference in Dover

The environmental workpackage was highlighted on the second day of the event. Gareth Davies from Aquatera, UK, discussed the aim of the Offshore Renewables Joint Industry Programme (ORJIP Ocean Energy) in reducing project consenting risk. The results of Pro-Tide NL's turbine fish friendliness testing were presented by Jacob van Berkel (Pro-Tide NL), highlighting the importance of blade strike velocity and leading edge curvature in determining the outcomes of a collision. Finally, Jim Fawcett (Isle of Wight Council) summarised the overall outcomes of the Pro-Tide environmental workpackage. Key recommendations included incentivising cross-disciplinary, international collaborations, to ensure that the industry as a whole focusses on common targets and objectives to ensure mutual benefit.

EU Funding Opportunities

Horizon 2020: Societal Challenge 'Secure, Clean and Efficient Energy' Work Programme for 2016-2017

The Low Carbon Economy focus area calls for actions to modernise the electricity grid and to provide the energy system with flexibility through enhanced storage technologies, with the active consumer at the centre of the energy system. The focus area has five sub-areas: Towards and integrated EU energy system, Renewable energy technologies, Enabling the decarbonisation of the use of fossil fuels during the transition to a lowcarbon economy, Social, economic and human aspects of the energy system, Supporting the development of a European research area in the field of energy.

LCE-15-2016: Scaling up in the ocean energy sector to arrays – **Deadline:** 8 Sep 2016

LCE-16-2017: 2nd Generation of design tools for ocean energy devices and arrays development and deployment 7 Sep 2017

LCE-19-2016-2017: Demonstration of the most promising advanced biofuel pathways – **Deadline(s):** 8 Sep 2016 and 7 Sep 2017

LCE-27-2017: Measuring, monitoring and controlling the risks of CCS, EGS and unconventional hydrocarbons in the subsurface – **Deadline:** 5 Jan 2017

LCE-30-2017: Geological storage pilots – **Deadline:** 5 Jan 2017

More details at:

http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-energy_en.pdf

COST Action Open Call – next Collection Date is 9th February, 2016

COST is the longest running European framework supporting trans-national cooperation among researchers, engineers, and scholars across Europe. COST aims to close the gap between science, policy makers and society throughout Europe and beyond. It allows participants to jointly develop their own ideas and new initiatives across all fields in science and technology through pan-European networking of nationally funded research activities. COST does not fund research itself, but provides support for networking activities.

More details can be found at: www.cost.eu.

INTERREG NW Europe call for project proposals open until 30th November, 2015

The INTERREG NW Europe call for project proposals closes on the 30th November 2015. The programme has three programme priorities: Innovation, Low Carbon, and Resource and Materials Efficiency. Projects can receive up to 60% co-funding if they can achieve a measurable change (=results) on the NWE territory in an economic, efficient, and effective way. One further call for projects will remain open until **31st May 2016**.

Further information on calls can be found here: <http://www.nweurope.eu/5b/#news>

INTERREG North Sea – Call 2 for proposals will open January 15, 2016

INTERREG North Sea Call 2 will open for new expressions of interest on January 15th, 2016. An Interwork event will take place in Amsterdam 9-10 December to support those developing applications for the second programme call. Key topics include 'Thinking Growth', 'Eco-innovation', and 'Sustainable NSR'. Projects can receive up to 50% co-funding from this programme.

Upcoming Events

November 11-13, 2015

International Course on Marine Energy Technologies. See <http://www.pro-tide.eu/new-course-on-marine-energy-technologies-on-11-12-and-13th-of-november/> for more information.

All of the Pro-Tide outcomes will be posted on the Pro-Tide website, www.pro-tide.eu, where you will be able to access them for the foreseeable future. We hope that you will continue to keep in touch with us online (website above), on twitter (@TidalTim), and by email (details below). While the Pro-Tide project is coming to an end, the test sites and partner projects will continue to develop: keep an eye out for follow-on projects such as TIDE-NRG as they progress.

Finally, the Pro-Tide team would like to thank all of the Environmental Aspects Group members for their contributions over the course of the project – your input has been invaluable.

Best wishes,



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