TETHYS BLAST

March 9, 2018

The bi-weekly Tethys Blast will update you with new information on Tethys, news article of international interest, and opportunities in wind and marine renewable energy. We hope you find this a valuable tool to keep you connected to colleagues, new research, opportunities, and industry milestones.

California Offshore Wind Industry Summit

The California Offshore Wind Industry Summit will be held in Sacramento, CA on March 13. The symposium will feature representatives of the offshore wind industry, key government officials, environmental NGO's, supply chain, and academic leadership to discuss the future of floating offshore wind energy in California.

ICES MRE Workshop

The ICES Working Group on Marine Renewable Energy is holding a workshop in Runde, Norway from April 16-18. The workshop will address approaches to assessing environmental impacts from marine renewable energy development and their application in planning, consenting and regulatory processes. The technologies addressed include tidal (in-stream and lagoon/barrage), wave, and offshore wind. Those interested in attending should contact the Chairperson by email: finlay.bennet@gov.scot

The International Council for the Exploration of the Sea (ICES) coordinates and promotes marine research on oceanography, the marine environment and ecosystems, and living marine resources in the North Atlantic Ocean and adjacent seas.

Register for METS/IMREC

Don't forget to register for the Marine Energy Technology Symposium (METS) and the International Marine Renewable Energy Conference (IMREC), which will be from April 30 – May 2 in Washington D.C. Today is the last day for early bird registration.

MRE Data and Information Sharing Webinar Available

Ocean Energy Systems hosted a webinar on data and information sharing on 27 February 2018. Visit OpenEI to view a recording of the webinar and take the follow up survey.

Technology Development and Innovation Open House

In support of the Department of Energy's Technology Development and Innovation (TD&I) Project to address wind wildlife operational challenges, NREL is hosting an Open House on June 20 at the laboratory's National Wind Technology Center in Boulder Colorado. The full-day event will provide information on environmental instrumentation characterization and development resources at the NWTC and discuss relevant topics.

New Documents on Tethys

New documents are regularly added to Tethys, hand-selected for their relevance to the environmental effects of wind and marine renewable energy. Short introductions to new or popular documents are listed below, accessible by the accompanying Tethys links:

The utility of point count surveys to predict wildlife interactions with wind energy facilities: An example focused on golden eagles – Sur et al. 2018

> Wind energy development is rapidly expanding in North America, often accompanied by requirements to survey potential facility locations for existing wildlife. Within the USA, golden eagles (*Aquila chrysaetos*) are among the most high-profile species of birds that are at risk from wind turbines. To minimize golden eagle fatalities in areas proposed for wind development, modified point count surveys are usually conducted to estimate use by these birds. However, it is not always clear what drives variation in the relationship between on-site point count data and actual use by eagles of a wind energy project footprint.

Black Guillemot Ecology in Relation to Tidal Stream Energy Generation: An Evaluation of Current Knowledge and Information Gaps – Johnston et al. 2018

> The black guillemot *Cepphus grylle* has been identified as a species likely to interact with marine renewable energy devices, specifically tidal turbines, with the potential to experience negative impacts. This likelihood is primarily based on the species being a diving seabird, and an inshore, benthic forager often associating with tidal streams. These behavioural properties may bring them into contact with turbine blades, or make them susceptible to alterations to tidal current speed, and/or changes in benthic habitat structure.

Collision sensitive niche profile of the worst affected bird-groups at wind turbine structures in the Federal State of Brandenburg, Germany – Bose et al. 2018

> Biodiversity-related impacts at wind energy facilities have increasingly become a cause of conservation concern, central issue being the collision of birds. Utilizing spatial information of their carcass detections at wind turbines (WTs), we quantified the detections in relation to the metric distances of the respective turbines to different land-use types. We used ecological niche factor analysis (ENFA) to identify combinations of land-use distances with respect to the spatial allocation of WTs that led to higher proportions of collisions among the worst affected bird-groups: Buntings, Crows, Larks, Pigeons and Raptors.

The State of Knowledge for Environmental Effects: Driving Consenting/Permitting for the Marine Renewable Energy Industry – Copping 2018

> The marine renewable energy (MRE) industry is young—most technology development and testing for tidal and wave devices has taken place over the past 10–15 years. As wave and tidal devices continue to be deployed for demonstration, testing, and pilot projects, and the earliest commercial arrays are being developed, regulators around the world are requiring that a significant amount of data be collected to determine the effects of devices and systems on marine animals, habitats, and ecosystems… This paper attempts to summarize the current status and suggest pathways for moving the industry forward through efficient consenting processes.

Underwater Assessment of Anthropogenic Noise Sources Using a Field Recording Method – Fernandez 2018

> Concern about underwater noise has been increasing due to the high number of projects needing environmental impact assessment to know how the underwater environment could be affected by pollutant noise, especially when living beings are involved. Since in countries like Chile there is no current legislation about anthropogenic underwater noise, the main objective of this work was to face this topic in Chile. To achieve it, noise sources present in rivers from Valdivia City-located in south center Chile-were evaluated.

Ocean Energy
ORJIP
working to accelerate offshore consenting

ORJIP Ocean Energy is a UK-wide collaborative programme of environmental research with the aim of reducing consenting risks for wave, tidal stream and tidal range projects. Partnering with Annex IV, ORJIP provides content input to Tethys Blasts. ORJIP wishes to make you aware of the following opportunities:

- Master in Renewable Energy in the Marine Environment (REM) joint degree offered by four universities has opened the application process for 2018-2020. Submissions are due by 15 March 2018.
- The FORESEA (Funding Ocean Energy through Strategic European Action) programme has launched its 4th call for proposals, due June 29.

News and Current Events

Marine Renewable Energy

Oregon wave energy test center gets $3M boost – Portland Business Journal

> Behind the scenes, Oregon's wave energy ambitions got a boost just before the Legislature brought its short 2018 session to a fast close this past weekend. It came in the form of $3 million, tucked into a sprawling spending bill that will help fund a test center off the coast at Newport that's being counted on to create hundreds of jobs.

SSE unit seeks approval for 220 MW power cable in Scotland - Reuters

> Scottish and Southern Electricity Networks (SSEN), a wholly-owned subsidiary of British utility SSE, filed a request to regulator Ofgem to approve a power link of up to 220 megawatt (MW) from Orkney to Scotland's mainland, it said on Monday. SSEN delivered a "Final Needs Case" for a subsea cable transmission link, the company said.

Aquatera delivers marine energy roadmap for Peru – Tidal Energy Today

> UK-based energy and environmental consultancy Aquatera has published a study which outlines the prospects for the development of aquatic renewable energy in Peru. The year-long study examined the potential energy markets and generation areas for wave, tidal, floating wind, floating solar and river hydrokinetic technologies.

Tidal energy device proposed for Shannon Estuary – Limerick Post

> DesignPro Automation is proposing to test a 60kW hydrokinetic turbine close to Canon Island on the Shannon Estuary as part of a European Union funded Horizon 2020 project. The proposed deployment is planned to run from September 2018 for a period of 12 months.

Wind Energy

GE to Deploy the World's Most Powerful Offshore Wind Turbine in 2021 – Greentech Media

> GE Renewable Energy made a bold statement on Thursday: It intends to lead in the offshore wind market. The company plans to deploy what would be the world's most powerful offshore wind turbine -- the 12-megawatt Haliade-X -- in 2021. That's up from GE's existing 6-megawatt turbine product, and it would be capable of producing 45 percent more electricity than the largest offshore wind turbine deployed today.

Statoil Acquires 50% Interest in 1.2 Gigawatt Polish Offshore Wind Farms – Clean Technica

Norwegian oil and gas giant Statoil has announced this week it has signed an agreement to acquire a 50% interest in the early phase development of two offshore wind farms in Poland with a combined capacity of 1.2 gigawatts. Statoil, which is the world's largest offshore operator and has significant oil and gas assets, is nevertheless making significant strides in diversifying its holdings to acquire renewable energy projects.

Ethiopia and Denmark join forces for wind energy expansion in East Africa – WindTech International

With the launch of the Wind Project Development Roadmap report Ethiopia and Denmark are joining forces for large scale expansion of wind energy in East Africa. The report is a part of the Danish-Ethiopian cooperation on utilising Ethiopia's wind energy potential through the Accelerated Wind Power Generation in Ethiopia (AWPGE) programme.

Unnamed utility to buy electricity from 220MW project in South Dakota - reNews

US Independent power producer sPower is to sell electricity from its 220MW Prevailing wind farm in South Dakota to an unnamed utility under a 30-year agreement. Construction of the project, which will be located in Charles Mix, Hutchinson and Bon Homme counties, is scheduled to start later this year, sPower said. Prevailing is expected to generate over $56m in tax revenue over the life of the project.

Vattenfall teams up with Caisse des Depots, WPD in French offshore wind bid – S&P Global Platts

Vattenfall is teaming up with Caisse des Depots and WPD to bid for the 250 MW-to-750 MW Eliade offshore wind project in Dunkirk, France, the Swedish utility said Tuesday. Caisse des Depots is a state-owned French financial institution. WPD is a German wind power developer with an established business in France. The Dunkirk tender is the third organized by the French government. Ten companies including Vattenfall were selected in a prequalification phase in May, 2017.