TETHYS BLAST

October 5, 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.

Upcoming Conferences

- The 3rd International Conference on Renewable Energies Offshore will be held in Lisbon, Portugal on October 8-10.
- The American Wind Energy Association (AWEA) Offshore WindPower 2018 will be held in Washington DC, USA on October 16-17.
- OCEANS 2018 conference will be held in Charleston, South Carolina, US on October 22-25.
- Ocean Energy Europe will be held in Edinburgh, UK on October 30-31.
- 2018 Australian Ocean Renewable Energy Symposium will be held on November 20-22.

Abstract Deadlines

- Abstracts for the International Conference on Ocean, Offshore, & Arctic Engineering (held June 9-14, 2019 in Glasgow, UK) are due on October 15.
- Abstracts for the European Wave and Tidal Conference (held September 1-6, 2019 in Naples, Italy) are due on October 31.

Workshop on Fieldwork in Tidal Stream Sites

A workshop on *conducting fieldwork in tidal stream sites* will be held on 2 November 2018 as part of the 8th MASTS annual science meeting in Glasgow, UK. This workshop is centred on the challenges and best practices of working at high energy sites, and is aimed at a broad range of stakeholders, including technicians, marine renewable energy technology developers, scientific equipment companies, scientists and academics alike. Workshop details are available here.

Upcoming NYSERDA Workshop

The New York State Energy Research and Development Authority (NYSERDA) is hosting a State of the Science workshop on November 13-14 about wildlife and offshore wind energy development. More information is available on the workshop site.

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:

Considerations for upscaling individual effects of wind energy development towards population-level impacts on wildlife – May et al 2019

> The expansion of wind energy poses challenges to policy- and decision-makers to address conflicts with wildlife. Conflicts are associated with impacts of existing and planned projects on wildlife, and associated difficulties of prediction where impacts are subject to considerable uncertainty. Many post-construction studies have demonstrated adverse effects on individuals of various bird and bat species.

Local scour around a model hydrokinetic turbine in an erodible channel – Hill et al 2018

> Laboratory experiments were performed to study the effect of an axial-flow hydrokinetic turbine model on an erodible channel under both clear water and live-bed conditions. Clear water experiments were performed at two scales with a local bed shear stress just below the critical state. Live-bed experiments, performed at small scale, examined the interactions between relatively large-scale bedforms and the flow induced by an axial flow turbine.

Out of sight of wind turbine – Reindeer response to wind farms in operation – Skarin et al 2018

> To meet the expanding land use required for wind energy development, a better understanding of the effects on terrestrial animals' responses to such development is required. Using GPS- data from 50 freely ranging female reindeer (*Rangifer taran-dus*) in the Malå reindeer herding community, Sweden, we determined reindeer calv-ing sites and estimated reindeer habitat selection using resource selection functions (RSF).

Marine Planning: An Ocean Energy Perspective – Johnson and Wright 2018

> It was long thought that the marine environment was not amenable to planning. Property rights, the core of the terrestrial planning system, were virtually non-existent in the marine environment, jurisdictions were vague, and the whole maritime area appeared as a single homogeneous mass of unstable waters without boundaries. The dominant and

traditional maritime industries, fishing and shipping, had managed to coexist in relative peace for hundreds of years without formal planning processes to guide them.

Finding out the Fate of Displaced Birds – Searle et al 2018

The Scottish Government has the duty to ensure that the development of the offshore renewable sector is achieved in a sustainable manner. A key challenge in delivering sustainable development is the potential effects of offshore renewable developments (ORDs) on populations of seabirds. Seabirds breed in internationally important numbers in Scotland, and many colonies are designated as Special Protection Areas under the EU Birds Directive [2009/147/EC].

At the Heart of Sustainable Energy Transition: The Public Acceptability of Energy Projects – Perlaviciute et al 2018

Public acceptability is at the heart of changing the energy system toward a more sustainable way of energy production and use. Without public acceptability and support for changes, a sustainable energy transition is unlikely to be viable. We argue that public acceptability is often addressed too late and should be incorporated into the planning process from the start.

News and Current Events

Marine Renewable Energy

The OE Buoy is Taking Shape – Marine Technology News

An innovative high-tech wave device currently being built in the U.S. will offer marine-based big data centers the chance to power up while cooling down. The project is a display of Irish marine innovation combined with U.S. engineering prowess, and is taking shape in an Oregon shipyard, where shipbuilder Vigor is constructing a marine hydrokinetic convertor called the OE Buoy for U.S. and Irish based wave-power pioneer Ocean Energy.

PLAT-I installed in Grand Passage, Nova Scotia, Canada – Sustainable Marine Energy LTD

The PLAT-I tidal energy system, developed by Sustainable Marine Energy, and equipped with four SCHOTTEL HYDRO SIT250 tidal turbines, was installed in Grand Passage, between Brier and Long Island, on Tuesday September 18th. The marine operations to install the mooring system and the platform started on Saturday 15th September. The PLAT-I floating platform was launched at A.F. Theriault & Son Boatyard in Meteghan River at 6am Tuesday morning, and was towed across to Grand Passage by local fishing vessels *TyKiSha-J* and *Island Lady G*.

Upgraded Lifesaver fit to size up Hawaii's swells – MarineEnergy.biz

> Fred. Olsen wave energy converter – BOLT Lifesaver – has been fully upgraded ahead of six-month deployment off the coast of Hawaii. The device underwent modifications to accommodate an oceanographic sensor package, developed by the Pacific Marine Energy Center, to demonstrate the wave energy converter's ability to directly power external systems.

DesignPro Renewables' 25kW device deployed and ready for operation – DesignPro Renewables

> At 7:00AM on the 25th of September, launch operations began for our 25kW hydrokinetic turbine at the SEENEOH test site in Bordeaux, France and by 11:00AM the device was successfully secured to the mooring, ready for operation. Our technical team arrived in France last week to assemble the turbines and attach them to the access platform. The assembly of the device was completed at the EVIAA workshop near Bordeaux before being transported to the Quay close to the deployment site.

Wind Energy

Lake Erie wind project gets federal OK – Crain's Cleveland Business

> The proposed $126 million Lake Erie wind energy project has gotten over a big environmental hurdle. The U.S. Department of Energy (DOE), in cooperation with other federal agencies, on Tuesday, Oct. 2, released a final environmental assessment of the project that includes what the agency calls a Finding of No Significant Impact, or FONSI. "This is the most significant single approval Icebreaker Wind has received to date," said Lorry Wagner, president of the non-profit, Cleveland-based Lake Erie Energy Development Corp. (LEEDCo), in a press release. "We are eager now to earn state approval and move forward."

Saskatchewan approves new wind energy project with 56 turbines – Canada's National Observer

> The Saskatchewan government approved a large-scale wind energy project Thursday for the province's southwest as a way to reduce greenhouse gas emissions. The Blue Hill Wind Energy Project will be located south of Herbert and is expected to have 56 turbines. Environment Minister Dustin Duncan said the project demonstrates the government's commitment to renewable energy.

IdentiFlight system to protect birds installed at Southern California wind farm – Wind Power Engineering and Development

> IdentiFlight International announced that two IdentiFlight units have been installed at Avangrid Renewables' Manzana Wind Power Project in Southern California for data collection and testing. Manzana is one of seven California wind farms in Avangrid

Renewables' U.S. fleet of more than 60 renewable energy projects. The IdentiFlight system is designed to detect protected avian species and protect them from collisions with rotating wind-turbine blades.

Global Wind Energy Council Forms Taskforce to Accelerate Offshore Deployment – Clean Technica

The Global Wind Energy Council announced on Wednesday that it would form a new Offshore Wind Taskforce dedicated to accelerating the development of offshore wind technology in non-European markets such as Asia and North America. Announced on the sidelines of the Global Wind Summit in Hamburg, Germany, the Global Wind Energy Council (GWEC) announced the formation of the Offshore Wind Taskforce as a means to support the acceleration of global offshore wind deployment in markets outside of the dominant Europe — such as North America and Asia, where countries like the United States and Taiwan are beginning to emerge as the next big destination for offshore wind.

URI ocean engineer: Sound from wind farm operations having no effect on environment – URI Today

After periodic acoustic monitoring of the Block Island Wind Farm since before it began operation in 2016, a University of Rhode Island ocean engineer has found that the sound from the operation of the turbines is having no detectable effect on the marine environment. "The sound from the wind turbines is just barely detectable underwater," said James H. Miller, URI professor of ocean engineering and an expert on sound propagation in the ocean.

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 and wishes to make you aware of the following opportunities:

- Horizon2020 funding call on "Developing the next generation of renewable energy technologies." Deadline is 16 October 2018.