TETHYS BLAST

November 30, 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.

New Tethys Story

West Coast Organization Channels Energy for Marine Renewables by Matthew Sanders and Marisa McNatt
A small nonprofit based in Portland, Oregon is helping to place the Pacific Region of the United States – comprised of California, Oregon, Washington, Alaska, and Hawaii – on the map as a vibrant destination for ocean renewable energy research and development. Available offshore wind, wave, and tidal resources offer significant opportunity for states in the Pacific Region to meet their renewable energy targets. Yet, actually tapping into the region's rich, coastal carbon-free energy sources is not without its challenges (read more).

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 excerpts from new or popular documents are listed below, accessible by the accompanying Tethys links:

Final Environmental Assessment LEEDCo Project Icebreaker Lake Erie, City of Cleveland, Cuyahoga County, Ohio – Parker et al. 2018

> Lake Erie Energy Development Corporation's (LEEDCo's) Project Icebreaker (also known as Icebreaker Wind) was competitively selected for a U.S. Department of Energy (DOE) financial assistance award under Funding Opportunity Announcement U.S. Offshore Wind: Advanced Technology Demonstration Projects. DOE is proposing to provide funding to LEEDCo to support the development of the demonstration-scale offshore wind project that would be located approximately 8 miles off the shore of Cleveland, Ohio in Lake Erie.

Noise characterization of a subsea tidal kite – Schmitt et al. 2018

> This paper presents the first noise measurements of a quarter-scale subsea tidal kite (anchored to the sea floor by a tether and flying in a figure-eight configuration in the water column) operating in field conditions. Challenges in the measurement and post-processing of the data are detailed. Results are presented for three operating conditions of the kite: (1) varying turbine rotations per minute (RPM), (2) varying kite speed, and (3) a twisted tether.

Effects of development of wind energy and associated changes in land use on bird densities in upland areas – Fernández-Bellon et al. 2018

> Wind energy development is the most recent of many pressures on upland bird communities and their habitats. Studies of birds in relation to wind energy development have focused on effects of direct mortality, but the importance of indirect effects (e.g., displacement, habitat loss) on avian community diversity and stability is increasingly being recognized. We used a control-impact study in combination with a gradient design to assess the effects of wind farms on upland bird densities and on bird species grouped by habitat association (forest and open-habitat species).

Modeling At-Sea Density of Marine Birds to Support Atlantic Marine Renewable Energy Planning – Winship et al. 2018

> Marine birds have the potential to be affected by human activities in the ocean environment such as offshore wind energy development. This report describes a project that developed maps of the spatial distributions of marine bird species in U.S. Atlantic Outer Continental Shelf (OCS) waters that can be used to aid ocean planning in the region and guide future data collection efforts. Sighting survey data from over three decades contained in the 'Northwest Atlantic Seabird Catalog' database, along with Eastern Canada Seabirds at Sea data from Canadian Wildlife Service, Environment and Climate Change Canada, were analyzed to derive seasonal maps of the spatial distributions of 47 marine bird species in U.S. Atlantic OCS and adjacent waters from Florida to Maine.

Minnesota Department of Natural Resources Guidance for Commercial Wind Energy Projects – Minnesota Department of Natural Resources 2018

> Commercial scale wind farms provide important renewable energy sources for our state and have a positive impact on Minnesota's economy. Wind energy conversion systems do not pose the same kind of environmental challenges that other sources do, prompting less concern about air and water pollution and the release of greenhouse gases. However, the turbines, access roads, transmission lines, and substations do have the potential to impact natural, recreational, and cultural resources.

News and Current Events

Marine Renewable Energy

MAKO installs tidal power turbine at Gladstone port – Marine Energy Biz

> Australian tidal energy company MAKO Tidal Turbines has deployed its tidal turbine for testing at the Port of Gladstone in Australia's north-east state of Queensland. The six-month trial, conducted in partnership with Gladstone Ports Corporation (GPC), will be aimed at demonstrating how tidal flows at the port can be harnessed to produce clean electricity.

French outfit to supply turbines for 120MW tidal energy projects in Djibouti – ReNews

> French outfit Blue Shark Power System has sealed a deal to provide 495 240kW tidal turbines with a total capacity of 120MW for projects in the African Republic of Djibouti. Blue Shark Power System will work with the Franco-English developer Weco Weco on the project.

Crestwing takes Tordenskiold to rough seas – Marine Energy Biz

> Tordenskiold device has been moved to the deployment site last week, but the weather proved to be 'too rough' to anchor the 30-meter long device, according to Crestwing. "The device is currently at its deployment site – the Port of Frederikshavn – awaiting for the suitable weather window to be anchored. As it looks now, it [the anchoring operation] could take place by this weekend," the company said in a statement.

French tidal power one step closer to commercialisation as SIMEC Atlantis spearheads Normandie Hydrolienne JV – SIMEC Atlantis Energy

> Further to last month's announcement, SIMEC Atlantis Energy is pleased to confirm that it has now agreed terms to define its collaboration with Development Agency for Normandy, the regional agency for economic development in Normandy, and regional investment fund Normandie Participations for the purpose of developing a phased large-scale tidal power project in the Raz Blanchard, Normandy, as well as fostering the marine industry and local supply chain in the region more generally.

Seabirds may help reveal how to produce renewable tide energy – Earth.com

> A new study published by the European Geosciences Union has revealed that seabirds could potentially be used to measure ocean currents. Obtaining data about the tide from birds could be particularly helpful for the marine renewable energy industry because detailed information on current speeds is needed to generate tidal energy.

Wind Energy

Poland Awards Nearly 1 Gigawatt Of Wind Energy In Latest Renewable Energy Auction – Clean Technica

> Poland's Energy Regulatory Office announced last week that it has awarded nearly 1 gigawatt (GW) of wind energy in a mixed renewable energy auction held on November 5 at prices so low experts believe the country could award a further 850 megawatts (MW) of capacity. The Polish Energy Regulatory Office revealed the results of five separate renewable energy auctions held over the first two weeks of November.

Kenya abandons thermal power plants for wind energy – ESI Africa

> Due to the recently connected 310MW Lake Turkana Wind Farm, Energy Cabinet Secretary Charles Keter has stated that three thermal power plants with a combined capacity of 190MW would no longer be needed. Keter was referring to Iberafrica Power Plant's 56MW contract, set to end in October next year, Tsavo Power's (74MW) ending in September 2021, and Kipevu Diesel's (60MW) contract which will run up until July 2023.

Vestas nets contract to build wind farm in Jordan – CNBC

> Danish wind turbine manufacturer Vestas has secured an engineering, procurement and construction (EPC) order for a 52-megawatt (MW) wind farm in Jordan. Commissioning of the Tafila facility is expected to take place in the first quarter of 2020, Vestas said in an announcement Tuesday.

Enel plans 6.1GW of new wind capacity by 2021 – Wind Power Monthly

> Utility Enel announced plans to invest €10.6 billion over the next three years in 11.6GW of new renewable energy capacity, including 6.1GW of wind, while closing 7GW in thermal power plants. In a Capital Markets Day presentation detailing its 2019-2021 industrial plan, Enel said it is aiming for its carbon-free production to rise to 62% from 48% of its total this year.

E.ON announces plans to build large onshore wind farm in Sweden – CNBC

> German utility E.ON is to build what it describes as one of Europe's "largest onshore wind farms." In an announcement Friday, the business said it had decided to invest in the 475-megawatt Nysater wind project in Sweden. The facility will be built jointly with Credit Suisse Energy Infrastructure Partners (CSEIP). Breaking down the deal, E.ON said that a fund advised by CSEIP would have 80 percent of the joint venture.

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:

- The EU-funded MaRINET2 project has launched its third call for applications. Successful applicants will receive free access to a world-leading network of testing and research infrastructures. The call is open to offshore energy technology developers, including wind, wave and tidal energy at system and component level. It is open until 15 December 2018.