Tethys Blast

August 21, 2015

Welcome to the latest edition of the bi-weekly Tethys Blast!

Tethys Blasts will update you with new information available on Tethys, new features of Tethys, and current news articles of international interest on offshore renewable energy. We hope that this becomes a valuable tool to help you stay connected to your colleagues and to introduce you to new research, new contacts, and ongoing milestones in renewable ocean energy development.

New Documents on Tethys

A total of 32 new documents have been added to Tethys in the last two weeks! These documents have been hand-selected for their relevance to the environmental effects of offshore renewable energy. The listings below are short introductions to several popular documents that can be accessed through the accompanying Tethys links:

Evaluating the Potential for Marine and Hydrokinetic Devices to Act as Artificial Reefs or Fish Aggregating Devices, Based on Analysis of Surrogates in Tropical, Subtropical, and Temperate U.S. West Coast and Hawaiian Coastal Waters - Kramer et al. 2015

> Wave energy converters (WECs) and tidal energy converters (TECs) are only beginning to be deployed along the U.S. West Coast and in Hawai‘i, and a better understanding of their ecological effects on fish, particularly on special-status fish (e.g., threatened and endangered) is needed to facilitate project design and environmental permitting. The structures of WECs and TECs placed on to the seabed, such as anchors and foundations, may function as artificial reefs that attract reef-associated fishes, while the midwater and surface structures, such as mooring lines, buoys, and wave or tidal power devices, may function as fish aggregating devices (FADs), forming the nuclei for groups of fishes.

Impulsive Sounds Change European Seabass Swimming Patterns: Influence of Pulse Repetition Interval - Neo et al. 2015

> Seismic shootings and offshore pile-driving are regularly performed, emitting significant amounts of noise that may negatively affect fish behaviour. The pulse repetition interval (PRI) of these impulsive sounds may vary considerably and influence the behavioural impact and recovery. Here, we tested the effect of four PRIs (0.5–4.0 s) on European seabass swimming patterns in an outdoor basin. At the onset of the sound exposures, the fish swam faster and dived deeper in tighter shoals.

EMEC Fall of Warness Test Site: Environmental Appraisal - European Marine Energy Centre 2014

> Prior to this Environmental Appraisal document and the associated process becoming current, all applications for individual deployments have required case-by-case appraisal by Marine Scotland, and consultation with Scottish Natural Heritage (SNH) and other consultees. For this purpose, all of the documentation produced by EMEC for the original FEPA application in 2005 (e.g. the Environmental Statement (ES) and subsequent updated Environmental Description) has been made available to each developer to support their individual licence applications.

Pentland Firth and Orkney Waters Enabling Actions Report: Ornithological Cumulative Impact Assessment Framework - MacArthur et al. 2013

> MacArthur Green has been commissioned by The Crown Estate to produce a methodological framework for the assessment of ornithological cumulative and in combination impacts of the Pentland Firth and Orkney Waters (PFOW) wave and tidal projects. This work is part of The Crown Estate's Enabling Actions work to accelerate and de-risk the development of the PFOW wave and tidal projects.

Current News

Current news articles of international interest on offshore renewable energy include:

Twenty Teams Advancing to Next Phase of the Wave Energy Prize

> Twenty teams have successfully navigated the first technology gate of the U.S. Department of Energy's (DOE) Wave Energy Prize to become official qualified teams. The 20 qualified teams, selected from the field of 92 official registered teams announced on July 6, will continue their quest to double the energy captured from ocean waves and win a prize purse totaling more than $2 million.

Barrow Company Awarded Contract for Local Offshore Wind Farm Refurbishment

The team at Barrow offshore wind farm looked close to home when they needed expertise to tackle a vital refurbishment. The DONG Energy owned and operated wind farm, located seven miles offshore west of Walney Island, Barrow-on-Furness, has signed a contract with Barrow-based supplier Elevated Systems Technology (EST) Ltd.

ORPC Ireland Ltd. to Assess Tidal Energy Feasibility in County Donegal

ORPC Ireland Ltd., a subsidiary of Portland-based Ocean Renewable Power Co., has been selected by the Sustainable Energy Authority of Ireland to conduct a feasibility assessment to identify tidal energy opportunities suitable for development in the coastal waters of County Donegal, Ireland.

First Offshore Wind Farm in the United States Begins Construction

In July, American offshore wind developer, Deepwater Wind, installed the first foundation for what is expected to be the first offshore wind farm in the United States. The project will be located three miles southeast of Block Island, Rhode Island. With five turbines totaling 30 megawatts (MW) of generation capacity, the Block Island Wind Farm is expected to come online in 2016.

Wave Energy Co Eco Wave Power Raises $2m

Israeli startup wave energy developer Eco Wave Power has closed a $2 million financing round (it’s first financing round) led by Pirveli Ventures. Following the investment, a partner of the investment fund will join Eco Wave Power's board of directors.