



Tethys Blast

April 15, 2016

Welcome to the latest bi-weekly Tethys Blast, which will update you with new information available on Tethys, new features of Tethys, and current news articles of international interest on wind and marine 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 wind and marine renewable energy development.

New Tethys Story

Tethys Stories are an opportunity to learn more about organizations, events, ideas, and news from the perspective of someone closely involved with the topic. If you are interested in submitting a Tethys Story, reply to tethys@pnnl.gov. Check out our most recent story:

[WREN Hub – New Information, Resources, and Analysis on Wind Energy Development on Tethys](#)

A new addition to the *Tethys* platform is live – WREN Hub – supporting the international collaborative project WREN. WREN (Working Together to Resolve ENvironmental Effects of Wind Energy) is an initiative under the International Energy Agency (IEA) Wind Committee to address the environmental issues associated with the development of land-based and offshore wind energy projects. Of particular interest to WREN and its collaborators is the need to better understand and resolve interactions between wildlife and wind turbines during installation and operational phases.

New Documents on Tethys

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 wind and marine renewable energy. The listings below are short introductions to several new or popular documents that can be accessed through the accompanying Tethys links:

[Framework for Testing the Effectiveness of Bat and Eagle Impact-Reduction Strategies at Wind Energy Projects](#) - Sinclair and DeGeorge 2016

The objectives of this framework are to facilitate the study design and execution to test the effectiveness of bat and eagle impact-reduction strategies at wind energy sites. Through scientific field research, the wind industry and its partners can help determine if certain strategies are ready for operational deployment or require further development. This framework should be considered a living document to be improved upon as fatality-reduction technologies advance from the initial concepts to proven readiness (through project- and technology specific testing) and as scientific field methods improve.

[Towards an Integrated Approach to Marine Benthic Monitoring](#) - Froján et al. 2016

In the UK, most marine benthic monitoring is carried out in a piecemeal fashion, funded by different sectors of industry that utilise the marine environment under licence. Monitoring requirements are imposed by licence conditions, which can vary considerably between licences. The UK Government also conducts marine environmental surveys in support of its legislative commitments.

[Research Priorities for PRIMaRE](#) - PRIMaRE 2015

For the marine renewable energy sector to meet its commercialisation targets and become successful in its development, a required enhanced collaboration between actors in the sector and especially among research institutions is needed. In particular this document presents the research priorities and development needs of the sector to meet commercialisation targets that the Partnership for Research in Marine Renewable Energy (PRIMaRE) has identified.

[Investigation of the Effectiveness of Bat and Bird Detection of the DTBat and DTBird Systems at Calandawind Turbine - Final Report](#) - Hanagasioglu et al. 2015

The data gained form DTBird and DTBat systems are comparable to those attainable by established methods and instruments. The study confirmed the initial environmental impact study and observations during the two years' of operation of the Calandawind turbine. The effectiveness of DTBird and DTBat Systems for protecting endangered species depends on the level of cooperation with the local ornithologists and bat specialists and careful selection of camera and microphone positions.

Wind Energy Industry Eagle Detection and Deterrents: Research Gaps and Solutions Workshop Summary Report - Sinclair and DeGeorge 2016

The main activity of the workshop was the breakout sessions, which focused on the current state of detection and deterrent technologies and novel concepts/applications for detecting and minimizing eagle collisions with wind turbines. Following the breakout sessions, participants were asked about their individual impressions of the relative priority of each of the existing and novel ideas. Criteria considered included:

- Likelihood of success —i.e., probability that conducting research and development (R&D) will yield useful, constructive results
- Ultimate affordability
- Ultimate efficacy
- Cost of R&D and product commercialization
- Length of time to achieve commercial application.

Current News

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

Could Atlantis' tidal energy vision throw UK industry a lifeline?

It has been a busy couple of weeks for Atlantis Resources Limited, the company behind ambitious plans to harness almost 650MW of tidal power capacity off the Scottish coast. Fresh from this month's announcement it has entered into a partnership with infrastructure investment giant Equitix to deliver its pipeline of projects, the company on Monday announced offshore contractor DEME has paid £2m in cash for a two per cent stake in Atlantis' tidal development company, Tidal Power Scotland Limited (TPSL).

Dominion: Rebidding cuts cost of offshore wind farm nearly \$100m

Dominion Resources Inc. says it's cut the potential cost of its offshore wind farm test project by as much as \$100 million by breaking it down into separate contracts and rebidding the work. Divvying up the project dropped the estimated total price tag to about \$300 million, officials said Thursday, compared to the \$375 million to \$400 million set by a single bidder last summer.

Canal will be a proving ground for tidal turbines

For about a quarter-million dollars, a nonprofit research organization will build a modest test facility at the Cape Cod Canal that may help prove that producing electricity from ocean currents can be commercially viable. The Marine Renewable Energy Collaborative will soon install the nation's first permanent facility to evaluate submerged turbines that generate electricity from tidal power, in 25 feet of water at the west end of the canal, near the Buzzards Bay Railroad Bridge.

As coal falters, wind energy is soaring

Coal giant Peabody Energy's bankruptcy filing yesterday comes as the coal industry continues its downward spiral. Blame new tough environmental regulations, cheap gas and low commodity prices for coal's demise. On the other hand, wind energy is booming. According to a new report by the American Wind Energy Association, more wind power was added last year than any other electricity source in the U.S., beating out natural gas and solar.