



Tethys Blast

September 19, 2014

Welcome to another September edition of the Tethys Blast! A new Tethys Blast will be sent to you every 2 weeks, unless you choose to unsubscribe; instructions to unsubscribe are at the bottom of this email.

Tethys Blast will keep you updated with new information available on Tethys, new features on 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.

Most Recent Blog Article

A new blog post will be available on *Tethys* every 2-4 weeks, so please rate and comment on the blog to engage with your colleagues. If you are interested in submitting a blog article, reply to tethys@pnnl.gov. Check out our most recent article:

[First Generation Offshore Wind in the US](#)

The development and planning for offshore wind in the United States began over a decade ago, and to date, nine projects have initiated efforts to become part of the first generation of Wind Farms in the US. Each of the projects are in various states of development with some much nearer to installation of devices than others. Installation designs deviate across projects which are constrained, among other things, by the environmental conditions at each site.

New Articles on Tethys

A total of 31 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:

[Fish Interactions with a Commercial-Scale Tidal Energy Device in the Natural Environment](#) – Viehman and Zydlewski

Fish are a key part of the marine ecosystem likely to be affected by hydrokinetic tidal turbines, but little is known about their behavior around such obstacles in the natural environment. In September 2010, two DIDSON acoustic cameras were used to observe fish interactions with a commercial-scale turbine in Cobscook Bay, Maine. Twenty-two hours (nearly two tidal cycles) of footage were collected.

[Renewable Energy Developments in an Uncertain World: The Case of Offshore Wind and Birds in the UK](#) – Masden et al

As marine renewable energy applications are increasing in the UK, environmental and cumulative impacts and their assessments are receiving considerable attention. The uncertainty, particularly surrounding cumulative impacts, however remains high and is becoming a cause of delay in the consenting process.

[ATOC/Pioneer Seamount Cable after 8 Years on the Seafloor: Observations, Environmental Impact](#) – Kogan et al

A study was conducted on the impacts of the presence of the Acoustic Thermometry of Ocean Climate (ATOC)/Pioneer Seamount cable on the benthos from nearshore waters adjacent to its origin at Pillar Point Air Force Station in Half Moon Bay, California to its terminus 95 km along its length on Pioneer Seamount. The coaxial Type SD cable was installed, unburied on the seafloor in 1995.

[Spatial and Temporal Benthic Species Assemblage Responses with a Deployed Marine Tidal Energy Device: A Small Scaled Study](#) – Broadhurst and Orme

The addition of man-made structures to the marine environment is known to increase the physical complexity of the seafloor, which can influence benthic species community patterns and habitat structure. Here we examined species biodiversity, composition and habitat type surrounding a tidal energy device within the European Marine Energy Centre test site, Orkney.

Screening Environmental Risk Assessment of Grease and Oil Emissions from Off-Shore Wind Power Plants – Arvidsson and Molander

This report constitutes a generic environmental risk assessment of emissions of grease and oil from off-shore wind power plants. In this context, risk is defined as an exposure of a stressor high enough to cause adverse effects on a certain endpoint. The stressors considered are alkanes, phosphate isodecyl/phenyl compounds and zinc alkyl dithiophosphate.

Current News

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

U.K's First Two-Bladed Offshore Wind Turbine Approved for Scotland

Two-bladed designs at this scale are a major innovation for the offshore wind industry and the deployment offshore of these 6 MW turbines at Methil will be the first in the world of their kind.

'Touchdown!' Oregon Company Deploys 1-of-a-Kind Wave-Energy Device

The Salem company's technology sits on the bottom of the ocean and on Sept. 4, it lowered its device for the first time to the seafloor in an effort to test its survivability and see whether it could generate electricity.

Flagship German Offshore Wind Farm project Humiliated by Technical Faults

The wind farm was officially turned on in August last year but was shut down again almost immediately due to technical difficulties that have still not been resolved – and now lawyers are getting involved.

Sea Urchin-Inspired House Captures Tidal Energy

The Hydroelectric Tidal House, envisioned by architectural designer Margot Krasojević, draws inspiration from some of nature's weirdest sea creatures — echinoderms like starfish and sea urchins whose symmetrical shapes have long fascinated biologists.