



WILDLIFE MONITORING AND BASELINE STUDIES FOR OFFSHORE WIND DEVELOPMENT

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New West Technologies in support of the
Wind and Water Power Technologies Office
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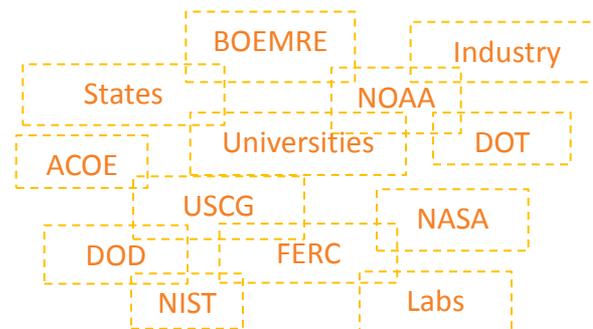
Program Framework: National Offshore Wind Strategy

A commitment by the federal government to facilitate responsible deployment of offshore wind energy

- Provides long range strategy for
 - Lowering cost of energy
 - Prioritizing federal R&D investments for maximum economic impact
 - Addressing the full range of stakeholder concerns
 - Reducing timeline for permitting and deployment
- Announced by Secretary Chu and Secretary Salazar on February 7, 2011



Led by DOE & DOI, in partnership with:



**Reduce
Cost of Energy**

**Promote Responsible
Deployment**

**Remove Market
Barriers**

**Develop
Innovative
Technologies**

**Demonstrate Next
Generation
Technology**

Cross-cutting WWPP Activities Aligned with National Strategy

World-Class Test Facilities

(ARRA Projects)

Clemson
15 MW
Dynamometer

Massachusetts
Large Blade Test
Facility
(to 90m)

\$70M

Removing Market Barriers

(Offshore FOA 1)

Siting and
Permitting

Infrastructure

Resource
Planning

\$16.5M

Next Generation Drivetrain R&D

(Tech. Viability
FOA)

Aggressively
Targets Key Cost
Components

\$7.5M

Developing Innovative Technology

(Offshore
FOA 2)

Computational
Tools
Turbine Design
Marine Systems
Engineering

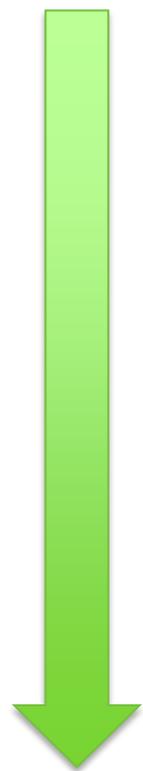
\$26.5M

Demonstrate Next-Generation Designs

(Offshore
FOA 3)

Demonstration
Project
Partnerships
with 50% Cost
Share

\$180M



1. **Baseline environmental data collection and analysis**
2. **Developing the necessary technologies and methods to assess and monitor environmental impacts**
3. Studies on actual projects from site assessment through operations to identify specific impacts
4. Development of avoidance and mitigation measures
5. Studies on cumulative impacts of large-scale deployment

Overarching: information collection, synthesis, and dissemination

Request for Information: Offshore Wind Environmental Research

Effort to gather public opinion on a potential environmental research initiative to inform the understanding of offshore wind energy development. Available on EERE eXCHANGE:

<https://eere-exchange.energy.gov/#FoaIdc9fd98bc-5a1f-45e5-b067-7fedcde9544a>

Baseline Research

- **Deep-Water Offshore Bat and Avian Monitoring Program***: Collecting baseline use data and testing and refining monitoring technologies including x-band radar from stabilized buoys and remote bat detection systems on buoys
- **Baseline Ecological Assessment and Modeling of the Mid-Atlantic:*** Collecting three years of boat-based and high-definition aerial survey data and using these data to develop predictive species models.

Monitoring Technologies and Methods

- **Assessment and Validation of Innovative Offshore Avian and Bat Monitoring Technologies:** Developing and testing a synchronized array of sensors including accelerometers, visual and infrared spectrum cameras, and acoustic monitors to monitor avian and bat impacts.
- **Monitoring Techniques and Technologies for Minimizing Impacts to North Atlantic Right Whales:** Assessing current techniques and technologies to ensure protection of marine mammals during pile driving activities.
- **Infrared Camera Enhancement:** Improving automated detection capabilities of infrared cameras.

Information Sharing and Analysis

- **Tethys:** Developing a database to house environmental research on offshore wind and marine and hydrokinetic activities.

Wildlife Monitoring and Baseline Studies for Offshore Wind Development

This webinar will present the initial results of the first year of data collection for two large-scale DOE funded studies that establish baseline data to aid in the siting and permitting of future offshore wind projects:

The Mid-Atlantic Baseline Studies Project: Understanding Wildlife Densities and Movements on the Mid-Atlantic Continental Shelf (Kate Williams, Biodiversity Research Institute)

Offshore Bat Research Activities in the New England, Mid-Atlantic Coastal States, and Great Lakes Regions (Steve Pelletier, Stantec Consulting Services, Inc.)



The screenshot shows a webinar interface with the following sections:

- Attendee List (118 | Max 1001):** A table with columns for microphone and video status, and a list of names: Vembu Subramanian, Wade Cooper, William Forney, William McAnally, and Zack Steele. A search bar is located below the list.
- Audio:** Radio buttons for "Telephone" (selected) and "Mic & Speakers". Below this, it displays: "Dial: +1 (312) 878-0511", "Access Code: 207-162-944", and "Audio PIN: 181". A red box contains the text: "If you're already on the call, press #181# now. (and [additional numbers](#) ...)".
- Talking:** melissa foley
- Questions:** A chat area with a green instruction box: "To ask the presenters questions, raise your virtual hand to be unmuted or type your question into the question area." Below this is a text input field with the placeholder "[Enter a question for staff]" and a "Send" button.

This is a zoomed-in view of the "Questions" chat area. It shows the same green instruction box and the text input field with the placeholder "[Enter a question for staff]". A "Send" button is visible at the bottom right of the chat area.

- 30 minute presentation, 5 minute Q&A following each presentation
- Please submit questions using the question chat feature. We will NOT be using the virtual hand raise function.
- Staff will compile questions and pose to presenters at appropriate Q&A periods.

ADDITIONAL OFFSHORE WIND INFORMATION



Log in / create account

- HOME
- KNOWLEDGE BASE
- WORKING WITH TETHYS
- CONNECTIONS
- BLOG
- HELP

Tethys is a database and knowledge management system that provides access to information and research pertaining to the potential environmental effects of marine and hydrokinetic (MHK) and offshore wind development. Tethys also hosts data from Annex IV, an international collaboration to gather information on MHK environmental research worldwide.



Webinar can be accessed at:
<http://mhk.pnnl.gov/wiki/index.php/Seminars>

- HOME
- KNOWLEDGE BASE
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- Institutions
- Databases
- International Regulations
- Seminars**

Seminars

Seminars/Webinars

Seminar	Date	Description
Recent Developments in Research on the Environmental Effects of MHK Technologies	09-Apr-2013	Experts in a number of fields came together to share new developments on topics such as baseline and monitoring data collection, instrumentation and experimentation, and synthesis and dissemination.
DOE Webinar #5	03-Apr-2012	The Annex IV Project: International Data Sharing Efforts for Potential Environmental Effects of Marine Renewable Energy
DOE Webinar #4	14-Dec-2011	Acoustic Impacts
DOE Webinar #3	14-Sep-2011	Monitoring Technologies and Strategies
DOE Webinar #2	29-Aug-2011	Aquatic Animal Interaction with Marine and Hydrokinetic Devices
DOE Webinar #1	27-Jul-2011	Environmental Data Management, Cumulative Impacts and Risk Assessment

Thank you!

RFI responses:

<https://eere-exchange.energy.gov/#FoaIdc9fd98bc-5a1f-45e5-b067-7fedcde9544a>

Tethys:

http://mhk.pnnl.gov/wiki/index.php/Tethys_Home