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# Environmental: Monitoring and Baseline Studies

## Overview, Summary, and Needs



Atlantic Wind Energy Workshop July 12-14, 2011

Bureau of Ocean Energy Management,  
Regulation and Enforcement

# Workshop Goals

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- ❑ Provide an update of recent research (environmental, social sciences) since the 2007 RE Workshop
- ❑ Identify key data needs and prioritize research gaps
- ❑ Develop partnerships and identify potential synergies for future studies
  
- ❑ Objectives: To assist BOEMRE and its federal partners in the environmental and technical reviews of WEAs and the evaluation of new projects



# Plenary – Federal Panel

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## Summary:

- 12 Agencies presented
- Several with key regulatory responsibilities over offshore wind projects
  - 8 agencies with mandated regulatory authority
  - Others have input and interest (responsible agencies)
- Ongoing coordination to expand upon existing framework to create guidance documents, as applicable
- Coordination through task forces and levels of communication are more prevalent now than ever before



# Plenary – Federal Panel

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## Outcomes:

- This workshop provided the starting point to continue this coordination and communication
- Other workshops and information transfer meetings (ITMs) are appropriate settings to continue coordination and communication



# Environmental Breakout Sessions

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- ❑ Objective: Within a smaller forum, focus on biological and habitat concerns related to Environmental Monitoring and Baselines Studies
- ❑ 6 panels convening over a two-day period



# Information Management and Data Sharing Products Panel

## Summary:

- ❑ Topics: ESID, Habitat Mapping, Sonar Mapping, Space Use Conflicts, MARCO and NROC Data Portals, OBIS-SEAMAP, Multipurpose Marine Cadastre (MMC)
- ❑ Numerous Portals for spatial data dissemination
- ❑ E.O. requires all Federal agencies to make their data available to other agencies
- ❑ Ongoing data harvesting is currently making data available for use



# Information Management and Data Sharing Products Panel

## Needs:

- ❑ Continued transparency and data sharing
- ❑ Organization and availability of data
- ❑ Data storage capacity
- ❑ Raw data needs
- ❑ Complete coverage of regions
- ❑ Cataloging of existing data; gap analysis
- ❑ Data quality and comparability (apples to apples)



# Developers Panel

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## Summary:

- Presented current and ongoing projects, including both individual wind projects and offshore transmission backbone
- Presented site-specific survey methods, and the applicability of the results to the regulatory process
- Perspective from developers – provided insight into the challenges and obstacles faced thus far





# Developers Panel

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## Needs/Obstacles:

- ❑ Timeline for permitting is a big risk for developers; developers looking for an efficient and established/known timeline from the agencies
- ❑ Established timelines would encourage more interest
- ❑ Permitting requirements are perceived as extensive and unclear, may be prohibitive for many developers
- ❑ Need for consistency within federal agencies between offices



# State Planning and Information

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## Summary:

- ❑ States conducted baseline studies to determine wind areas to site offshore wind energy (NJ, MA, ME, RI), and development of environmental protocols (RI)
- ❑ Each approach varies, based on existing information and specific goals outlined in the states' CMPs
- ❑ Coastal Marine Spatial Planning (CMSP) puts into state's hands, a developing process
- ❑ State determinations of “local” resources of critical importance (requiring protection) are key



# State Planning and Information

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## Needs/Obstacles:

- ❑ Data are more regional in nature, limited site-specific data
- ❑ Large quantity of data to process
- ❑ Lack of standard survey methods
- ❑ Lack of data quality guidelines (QA/QC)
- ❑ Reliable data standards will ensure that investors are making wise decisions by siting a wind project within areas identified using baseline data
- ❑ Ensure redundancy is not occurring



# Broad Scale Habitat, Abundance, and Distribution- Consultation Process

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## Summary:

- Agencies discussed their mandates relative to wind energy
- NMFS and USFWS consultation processes relevant to T/E and protected species
- Developer's options – informal mechanism, “seat at the table”



# Broad Scale Habitat, Abundance, and Distribution- Consultation Process

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## Needs:

- ❑ Characterization data necessary to adequately prepare take estimates (IHA, LOA)
- ❑ Developers need to identify project-specific risks; common impacts noted – noise, entanglement, bird strike, vessel strike, oil/fuel spill
- ❑ Need to begin consultation early
- ❑ Joint guidance for data collection between BOEMRE, NMFS, USFWS
- ❑ Establish timelines for consultation



# Broad Scale Habitat, Abundance, and Distribution- Baseline Data

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## Summary:

- ❑ FMCs – spokesmen for the stakeholders – i.e., fishery interests
- ❑ FMCs role outlined – gather and analyze data; no data collection; recommend EFH and HAPC areas in collaboration with NMFS
- ❑ FMC programs of interest to BOEMRE – SASI (swept area seabed impact approach)
- ❑ NMFS – overview of ongoing marine mammal survey efforts (ship, aerial, PAM); search for the best density and distribution indicators
- ❑ NMFS data variability (CetMap) – prioritization: habitat based density, stratified density, habitat affinity, presence only
- ❑ BOEMRE – discussed AMAPPS, collecting broad scale, multiyear data using various technologies, to be combined into a common database
- ❑ US Navy – conducting numerous data collection projects in their OPAREAs; broad geographic coverage; coordinating with NOC to make historic and ongoing data available



# Broad Scale Habitat, Abundance, and Distribution- Baseline Data

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## Needs:

- ❑ Data sharing between stakeholders and agencies to be able to assess and identify impacts to fisheries (one stop shop)
- ❑ Other survey technologies being investigated – HD video and photo, AUV, UAV, marine mammal tagging
- ❑ Need more information on risk to assess remaining data gaps
- ❑ Need to compile existing protocols and study results for project-specific surveys



# Acoustic Monitoring Technology and Impacts

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## Summary:

- Ambient noise measurements, with capability to identify species-specific vocalizations
- Active acoustics – benefits, limitations
- Acoustic data processing – quantity of data collected, culling into a useful format
- EMF and impacts to marine species, case studies
- NMFS Ocean Noise Project – validating PAM methods against other survey methods; documenting occurrence, etc.





# Acoustic Monitoring Technology and Impacts

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## Needs:

- ❑ Data management can be challenging (non-homogenous, differing formats, data volume)
- ❑ Impacts of EMF: DC vs. AC transmission to marine species; sensitive Atlantic species characterized? Species at risk – slow moving, benthic? Potential data deficiencies?
- ❑ Data processing capability – make it more available, better ways to process the data, data processing standards
- ❑ Tools available to integrate acoustic data into spatial models?



# Summary of Common Issues

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- ❑ Further clarify responsibility assignments between various agencies and the developers (regional research vs. site-specific surveys)
- ❑ If existing data are to be used, are they adequate? Need a mechanism to determine data quality, adequacy – how much is enough?
- ❑ What species are at risk? Are impact thresholds for individual resources known? Threshold for sensitivity, when does impact occur? Cumulative effects?
- ❑ For migrating or highly motile resources, what is an acceptable scale for surveys? Regional vs. site-specific
- ❑ Database management, maintenance, storage & archival, as well as data cataloguing



# Workshop Goals – What Did We Achieve?

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- ❑ Provide an update of recent research (environmental, social sciences) since the 2007 RE Workshop
- ❑ Identify key data needs and prioritize research gaps
  - Understand agency roles and responsibilities
  - Data sources reasonably well defined, identified, but issues with data adequacy, cataloguing – precludes data gap id
  - Regulatory process framework in place, but the data specifics and data needs remain in flux
  - Data gaps difficult to identify – sensitive species, ability to identify impacts limited



# Workshop Goals – What Did We Achieve?

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- Develop partnerships and identify potential synergies for future studies
  - Excellent forum to bring together regulators, industry, and researchers
  - Great opportunity for individuals to acquire knowledge re: advances in regulations, new research results, new projects
  - Information is key to potential partnerships and synergies
  - Continuation of formalized working groups

