

**OFFSHORE WIND, RECREATIONAL AND COMMERCIAL FISHERMAN
MITIGATION MEASURES DEVELOPMENT**

NARRAGANSETT WORKSHOP REPORT

To: Brian Hooker, BOEM

From: Peggy Farrell, Ecology and Environment

Date: November 16, 2012 (4:00 P.M. - 8:00 P.M.)

Location: University of Rhode Island
Graduate School of Oceanography
Narragansett, RI

RE: Development of Mitigation Measures to
Reduce Conflicts between Wind Industries
and Fishermen – Narragansett Rhode Island
Stakeholder Workshop



ATTENDEES

Name	Agency
Drew Carey	Coastal Vision LLC
Grover Fugate	RI Coastal Resources Management Council
Michelle Hallowell	Kelly Drye & Warren LLP
Sarah Smith	Environmental Defense Fund
Sarah Schumann	Not specified
Aileen Kenney	Deepwater Wind
Bill Sosnicki	Not specified
Dave Beutel	RI Coastal Resources Management Council
James Monroe	Blue Water Dynamos/SMD
Justin Kirkpatrick	National Oceanic and Atmospheric Administration
Matthew McPherson	National Oceanic and Atmospheric Administration
Lanny Dellinger	Rhode Island Lobstermen's Association
Ken Court	Not specified
Rhonda Jackson	Fishermens Energy
Bill McElroy	RI Lobstermen's Association
Azure Cygler	URI Coastal Resources Center
Dave Monti	RI Saltwater Anglers Association, Charter Operator
Peg Parker	Commercial Fisheries Research Foundation
Rich Hittinger	RISAA
Edward LeBlanc	U.S. Coast Guard, Sector Southeastern New England
Dave Preble	New England Fishery Management Council
Brian Hooker	Bureau of Ocean Energy Management
Darryl Francois	Bureau of Ocean Energy Management

Peggy Farrell	Ecology and Environment, Inc.
David Trimm	Ecology and Environment, Inc.
William Daughdrill	Ecology and Environment, Inc.
Sarah Bowman	Ecology and Environment, Inc.
Stephanie Moura	SeaPlan
Patrick Field	Consensus Building Institute

OVERVIEW

The Bureau of Ocean Energy Management (BOEM) is developing best management practices (BMPs) and mitigation measures for reducing use conflicts within portions of the U.S. Atlantic Outer Continental Shelf (OCS) that may be used by the wind energy industry and fishermen. The purpose of the regional stakeholder workshops is to engage fishermen and wind energy developers (plus interested agency representatives) in dialogue that would result in development of BMPs and mitigation measures that would be beneficial to both parties and relevant for inclusion in future BOEM NEPA analyses. The outreach workshops do not discuss any specific wind energy development projects, but rather describe general types of practices or studies that could be implemented as mitigation for wind energy development. As projects are proposed, there will also be opportunities for site-specific mitigation measures. This document constitutes the Outreach Report from the Rhode Island stakeholder workshop.



MEETING SUMMARY

Workshop attendees signed-in at the welcome table. Attendees were directed to four different tables so that different industries and agencies were represented at each table for the breakout sessions. Several visual displays were placed around the room for attendees to browse. The meeting started at 4:00 pm when Pat Field, the meeting facilitator, welcomed everybody to the meeting and asked each participant to introduce themselves and state the industry or agency they represent. He then briefly discussed the format for the meeting so that attendees had an understanding of the agenda and meeting rules. This was followed by an introduction of Brian Hooker, BOEM Biologist, who opened the meeting with a PowerPoint presentation that included:

- Various stages of offshore wind facility development.
- Purpose of the workshops.
- Vessel Trip Report and Vessel Monitoring System data for the New England Wind Energy Areas.
- Known fishing and wind energy questions and concerns.
- Current Best Management Practices required by BOEM.
- Various opportunities for input under NEPA.
- A description of BOEM's Environmental Studies Program.



Most time during the meeting was spent in discussion during two breakout sessions. Breakout Session #1 began directly after the presentation. Each of the four discussion tables represented a breakout group. Groups worked on identifying issues of concern from their perspective, utilizing the list of issues identified at the Virginia Beach workshop as a guideline. At 5:45 pm, the facilitator asked each table to report out their major topics of discussion. A 15-minute break was held at 6:00 pm.

Breakout Session #2 followed the break and focused on formulating potential mitigation measures that could be employed during

offshore wind energy development to reduce impacts. Utilizing the handout as a guide, each group identified potential management strategies that would alleviate some of their concerns. At 6:30 pm the facilitator once again asked each table facilitator to identify the key points that were discussed. Before closing the meeting, Mr. Field requested feedback and comments from the participants on the workshop format and content which are listed further below. The meeting adjourned at 8:00 pm.

IDENTIFICATION OF CONCERNS

Table 1 lists issues and concerns regarding offshore wind development identified at the Rhode Island Workshop.

Table 1: Rhode Island Meeting Issues and Concerns

<p>Exclusion Zones and Access</p>	<ul style="list-style-type: none"> • Would there be a transit lane if an exclusion zone is created? • Exclusion zones would need to clearly be defined – who is excluded, and where? • Tie-ups and trespassing issues – who enforces the rules? Would it be the state or federal agency or a combination of both? This is an issue that needs clarification. The states won't have the money to do this. • The preference is for fishermen to have total access to the area. Fishermen are wary of large areas of the ocean being closed off to them. • What are the typical construction durations (turbines and cables)? • How will closures be marked? • Recreational fishers want access to pelagic species. • Will there be exclusion zones for maintenance and decommissioning activities? What will be their magnitude and timeframe? • What are the lessees' rights and responsibilities? They need to maintain certainty and consistency. If a lessee will control the exclusion zones, then BMPs and regulations should be laid out in a framework in consultation with impacted users. • Important not to forget the informal arrangements between gear types that are not written down; i.e. lobstermen agree not to place traps during certain times of year for mobile gear fishermen to be able to fish. • The style of the array could affect the size of the exclusion zone. For example, the Statoil project is a floating-with-cables design which has a larger footprint and a potentially larger exclusion zone.
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	<ul style="list-style-type: none"> • For smaller vessels, safety zones are impractical in rough seas because they are already limited in where they can safely transit. • How much security is needed? If we have another 9/11, will the whole area be shut off to everybody?
Regulations	<ul style="list-style-type: none"> • How will offshore wind rules overlay and interfere with all the other fisheries management measures that exist? • Overall concern about getting squeezed out of use in general due to the conflicting uses such as whales and protected marine mammals, council closures, sand & gravel mining, cable laying, shipping & freight activities, visual/aesthetic stakeholders, DoD, Native Americans, etc. Fishermen feel they are being forced to fish on a postage stamp. • Who will impose regulatory restrictions? NMFS, State, USCG, Fisheries Mgmt Council? • How to balance regional priorities for food, energy, national security? • Displacement of fish and fishermen is a primary concern. As fish and fishermen are displaced from wind energy areas, this could concentrate effort in other areas, increasing conflict there.
Communication	<ul style="list-style-type: none"> • USCG Notice to Mariners can be used but are not sufficient. Can a new communication process be created with the Coast Guard? More time is needed for notifications. NOAA weather channel may be better for energy information. • How can fishermen be notified that an area is closed for inspection or maintenance? Email notifications with maps showing state projects. • What are the effects/likelihood of catastrophic failure, such as from lightning strikes, bird strikes, etc.? • BOEM website needs to be more comprehensive and include state projects since fishermen don't think in terms of state vs. federal. • A fishery liaison should be established at the execution of the lease period. • Most pleasure boaters can't read a NOAA nautical chart. How do all the rules and information get uploaded to and updated in electronic charts and be made available to the general public?
Siting Process	<ul style="list-style-type: none"> • Fishermen want to be more involved in the siting process. There is currently no requirement in RI for a funded fisheries liaison to be involved in the siting process. Therefore fishermen feel they are involved in the process too late. There should be lots of opportunities for the public to comment throughout the process. • The Fisheries Advisory Board (FAB) has a good process of communication that could be useful for the WEA siting and revision process. It may be helpful to use this process to engage local fishermen earlier on in the siting process • When can the fishing industry know when to pay attention to actual development proposals, turbine configurations, etc.? When does it get "real"? • Expert draggers can drag exactly where they want to and know exactly where their doors are. They sweep to turn around and will set their points so as to avoid turbines. The proposed spacing distance between turbines seems to be large enough and shouldn't be an issue.
Safety	<ul style="list-style-type: none"> • Can there be improved safety by having VHF repeaters required on wind turbine structures? • Will EPIRBs work within wind arrays? • Could there be collisions of vessels within an array? Concerns about safety after the array is complete (i.e. multiple collisions in one year). • What about a vessel mechanical breakdown inside a wind facility? They could be drifting without power and need a lot of room to restore steering. • It would be safer if radars are located or adjusted to reduce clutter to a

	<p>fisherman's radar.</p> <ul style="list-style-type: none"> • The floating foundation type needs more clarification and brings with it a lot of new safety concerns. • Once exclusion zones are put in post-construction, the industry will have no means/leverage to reopen concerns or mitigation. For example, the Maine LNG exclusion area expanded post 9/11, but there are no means to reopen the settlement agreement now. • Display exactly where the cables exit out of the foundation types. Boats may be able to be near the actual turbine, but exposed cables from the turbine to the seafloor could be a problem. • Where is the "fire escape" ladder located on the turbine? • It would probably be ok to not allow tie-ups, but there could be an incentive because of fish habitat to fish directly next to the turbine which could be dangerous. Turbines would need to be marked as "No Trespassing" because technically they are private property. • Wind companies might want to allow tie-ups as an incentive for fishermen to make the area more economically available to them. • Fishermen could anchor and drift and fish directly upstream of the turbine instead of tying up to it. • Potential problems where pots/nets get wrapped around turbine.
EMF	<ul style="list-style-type: none"> • Attraction vs. repellant effects on fish, eggs, larvae. • Second trophic level effects - will fish be attracted to the structures/reef effect?
Maintenance	<ul style="list-style-type: none"> • How long do maintenance operations take? • Will there be exclusion zones during maintenance?
Marine Wildlife	<ul style="list-style-type: none"> • Will wind turbines, cables, EMF, and/or noise affect fish migration? It could create an obstacle and restrict migratory and pelagic patterns. • What assurance is there to collect data or establish a baseline characterization, then monitor the resource? • Concerns about severity, intensity, and duration of blasting, pounding, and other noise factors associated with construction. The potential for multiple seasons of construction are likely to alter substantially the distribution of fish. • Concerns for both recreational and commercial fisheries. • Concerns that unwritten areas where fishermen prefer to fish and find productive may become affected, and if fish are displaced from these areas, conflicts among fishermen may increase as well. • Concerns about wind energy projects in Cox's Ledge, a prime fishing ground. • Seasonality is important; for example, it is likely that the best time for construction may also be the same time as lobster season. • In Europe, commercial fishermen have already been pushed out of use in many cases and their resource is not near as rich as here in the US. • Concerns for multiple wind projects. Having several at once or close together is likely to cause major impacts and disruption. • How can a wind company actually ensure no fisheries disturbance? Construction is going to be a big disturbance. The key is to minimize it and use the best technology. • Should a whale be seen offshore, who should be contacted (NMFS, the developer) and how?
Liability	<ul style="list-style-type: none"> • Who pays when there is a loss of gear or gear that got caught on cables and turbine foundations? • There is a possibility for entrapment of lobster gear on lattice and other turbine foundation types.

	<ul style="list-style-type: none"> • What additional insurance might fishermen need relative to access and transits? • Even if regulators do not limit navigation, insurance companies for either wind industry or vessels may simply underwrite policies with requirements to stay out of arrays (i.e. if sail within wind array, they won't provide insurance). • If one problem occurs, then all insurance companies may stop insuring fishermen that fish near or in the wind arrays, as occurred in Europe. • Concerns that any payments or compensation may not recapitalize the industry. • There should be a contingency plan if a wind lessee goes under or walks away – what is the assurance for responsible operations or decommissioning?
New Issues	<ul style="list-style-type: none"> • What about the potential use of offshore wind facilities to also be used as areas for aquaculture or for tidal energy operations? • There will be impacts on the energy grid as a whole if an entire shut-down of the facility is needed in an emergency. Can the rest of the grid react in time to respond adequately? How will this affect fishermen?

BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

Table 2 contains potential BMPs suggested at the meeting in Rhode Island.

Table 2: Rhode Island Meeting Best Management Practices and Mitigation Measures

Project Design , Navigation, and Access	
Studies and Analysis	<ul style="list-style-type: none"> • Navigational risk assessments are a good idea in considering traffic patterns and in minimizing conflicts with existing users. This is already required by BOEM. • An intergenerational study on fish is needed for acoustics and acoustic thresholds. • Start with no permanent exclusion zones. They should be established after a project is complete. • Fishing interests should be involved early enough in the siting process to balance wind business decisions and fisheries impact issues. • A skilled and dedicated fisheries liaison (commercial & recreational) (paid or compensated) should be actively involved in the siting and design process. The liaison should represent interests across fishing subsectors. • Stagger projects so they are constructed over longer periods of time to minimize simultaneous impacts. • Consider the size of the lease so that with a larger lease area the wind developer has more flexibility where they site the final array.
Spacing of Turbines	<ul style="list-style-type: none"> • Spacing wind turbines closer together to minimize the overall footprint and affected area would not work for the wind industry. • If exclusion zones around turbines are determined necessary to promote safety, should they be kept small in size or include exemptions for small vessels that would not be endangered by the turbine blade sweep? No, vessels would be large enough. • Developers must work closely with different vessel types to consider adequate spacing between turbines since vessels and space needs vary widely by gear type.
Navigational Safety	<ul style="list-style-type: none"> • Specific navigational precautions should be implemented regarding radar, collisions, emergency response plans, and trial mock emergency responses. • Navigational rules need consistent framework and criteria. The “rule book” for wind farms should be known before leasing process: the lessee has to know the mitigation framework up front. • Must consider vessel-related limitations to navigational ability. • Weather conditions will significantly affect safety inside wind facilities.

	<ul style="list-style-type: none"> • Important to underscore the 2-way responsibilities of boat owners & USCG/ NOAA to put out and get the most updated charts. • Consider exclusion zones for non-commercial vessels. • If you want to minimize collisions in a wind array, you might restrict recreational vessels while still allowing commercial fishing since it is their livelihood. • Don't treat navigational and shipping channels as sacrosanct. If you can later even them out slightly (by 100s of meters, not miles) for construction or operations, and avoid other conflicts as well, this would be good. • Fishermen need clear means of input from Coast Guard, the developer, or anyone else to restrict or limit access to the wind arrays. • Upgrade navigational radar for fishermen. • Possibly use radar reflectors and specialized markings. • Localized AIS could include radar electronic warning. • BOEM should require charts to be updated on a regular basis, and for notification of those updates to be sent to stakeholders and the public. • BOEM should have a website dedicated to information dissemination. • Use an "invisible dog collar" idea: when a vessel crosses a safety zone next to a turbine, a device on the vessel would beep or flash and tell the fishermen the details about the area they are in such as boundaries, cable locations, tie up rules, etc.
Cabling	<ul style="list-style-type: none"> • The current 6-foot and 1-3 meters for cable burial depth is good. Methods to ensure that they stay buried should be implemented. A standard burial depth should be instituted at which, even with storms, cables would remain buried. • A standard needs to be created at which a cable that was once buried 6 feet deep is now only 1 or 2 feet deep due to storms or sand movement – when does it need to be reburied? How will this constantly be monitored? • Telecommunications cable protocol for fishing gear replacement should be used. • In-situ studies are needed to ground truth the model predictions of EMF for inter-array and transmission. • Look to other cable rules for guidance – what are the requirements for the telecommunications cable industry? • Site-specific, temporal considerations are needed to minimize impact. • Include cable locations in charts and Notice to Mariners. • There needs to be an on-going surveillance and inspection process for when storms and other events might have uncovered cables. It would be desirable if fishermen could prompt an inspection even if the developer doesn't think it is necessary.
Safety, Liability, and Insurance during Operations	
Safety Procedures	<ul style="list-style-type: none"> • If fishers know up front there is a fund to compensate for verified loss/damaged gear, it will be an incentive to make safe decisions at sea. • Encourage insurance companies to not drop policies. • BOEM should work to figure out how to underwrite insurance for any other ocean obstructions. • Developers should offer classes and training sessions to fishermen and others so they have all the information they need to operate safely.
Gear	<ul style="list-style-type: none"> • Can gear be modified? Adding mooring balls is a possibility. • Different turbine foundations may need different gear modifications.
Natural Resources	
Impacts to Fisheries	<ul style="list-style-type: none"> • Make sure cables have EMF shields to further mitigate risk to the fishery, especially juveniles and breeding stock. • Developers should share any detailed seabed maps that they have. Fishermen should have an opportunity to identify areas of importance to them during early

	<p>design and in a confidential way to avoid trade secret, so, to the extent possible, the developer can avoid building in these microsites.</p> <ul style="list-style-type: none"> • Construction can be done in a phased process instead of closing off the entire area all at the same time, which would minimize impacts. • BOEM should require the latest and most environmentally friendly construction methodologies to reduce impacts such as no use of jack-up barges and less intrusive cable burial techniques. They should require annual reports from industry of the newest and best techniques. • Lay cables alongside existing communication cables to reduce bottom disturbance. • Developers need to be educated about fish eggs and seasonality so construction is done at a time when impacts would be minimized. They need to avoid important times of year for fisheries and stick to windows when impacts to fish and eggs would be small, paying particular attention to juvenile recruitment. • Maximize onshore construction rather than spending more time in the water. • Many times a marine area that is not used by fishermen is because it's closed for important habitat protection. But if construction techniques were good enough to have very little impact, or if it's a floating foundation, then maybe those areas are a good place to build an offshore facility. Fishermen won't be going there anyway and these areas would receive further protection. • BOEM needs to list out what the top 5 most environmentally damaging techniques are, and then ask industry to make them better/less destructive. Perhaps offer grants to find ways to make the technologies better. The goal is to make the better technologies cheaper for industry to use.
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Stakeholder Engagement

<p>Communication</p>	<ul style="list-style-type: none"> • Use a dedicated very high frequency (VHF) channel for the transmission of any warnings related to local renewable energy projects – maybe utilize the National Weather Service VHF channel for this purpose. • Direct mailings, letters, emails, and announcements in fisheries trade publications. • Full Public Relations campaign to educate fishers and all boaters of new chart icons/legend, traffic alerts, and construction alerts. • There will be the need for on-going consultation throughout the life of a project, not just at the design and construction stage. Each project should consider establishing a long-term committee of stakeholders and for them to meet regularly to address on-going issues and concerns. • Information about phases such as siting, leasing, construction, operation and shut-downs should be provided as early as possible. • Tiered notifications that are more location specific would be helpful. • Communication via a fisheries liaison. • Strong relationships with fishermen of all gear types within an area is very important. Developers must help fund the participation of liaisons and representatives of commercial fishing given the expense of such engagement. Preferably, fisheries liaisons would be hired by fishermen but funded by industry. Industry input is essential for validity and should be part of the selection committee. • A <i>Communication Plan</i> should be developed for gear entanglement issues. Clear communication channels are needed for gear loss during fishing operations. • Need to move away from the state-centric focus. Other communication options: BOEM website, National Fisherman's Magazine, Quarterly Wrap Up, Fishing organizations, RI FMC, RIDEM, or a listserv to inform about closures. • There are so many rules by lots of different agencies. There are so many that the average person won't know them all. All the rules for a particular offshore facility need to be put into one book so everybody can easily find out what they are.
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	Nobody wants to go to jail for breaking a rule they didn't know about.
Liability	
Contingency Funds	<ul style="list-style-type: none"> • BOEM does not currently have the authority to establish or manage fishing mitigation or compensatory funds related to offshore wind energy facilities. Should such an approach be considered in the U.S.? There is strong interest in creation of a contingency fund with money from developers to be allocated among impacted user groups in a fair and transparent method. Can be administered by the state (i.e. Cape Wind). Administration of it should be effective and efficient, not overly cumbersome but have a sufficient check and balances system. • Look at existing models for examples. • Create a bond for closures (already in regulations for decommissioning plans). • Potential mitigation would be fisheries capacity reduction. In other words, pay people to stop fishing and get out of the industry.

SUGGESTIONS FOR FUTURE WORKSHOPS

Suggestions from the Virginia Beach meeting were taken into account for the Rhode Island meeting. The Rhode Island participants had a list of ideas with which they could agree, disagree, or add to. The workshop was timed to occur directly after conclusion of the New England Fishery Management Council meeting in Newport, RI. Attendees appreciated the food and drinks that were provided because the meeting occurred over dinnertime and the refreshments provided a much needed energy boost.



Some participants felt that the breakout sessions blended together too much and it wasn't clear how they were different. For future meetings, each table facilitator should take a minute at the beginning of each breakout session to explain its purpose so that the distinction between the two is clear. It was also suggested that issues and concerns could be organized by phase of construction so that it is clearer where each one fits into the overall process. And, similar to the VA Beach workshop, attendees requested that meeting minutes be sent out to the group. Everybody felt that future meetings will keep improving and we should continue to provide the concerns and BMPs from previous workshops as examples. Participants that attended both the VA Beach and Rhode Island meetings commented that the Rhode Island workshop format was well received, and that results from this meeting be sent to the VA Beach participants so that they could see the progress made.

