Maine Floating Offshore Research Array

Wildlife Work Session #1

MARCH 5, 2021 1:30 – 4:30 PM

Webinar will begin in a few moments.
• Everyone, please MUTE yourself, except when speaking. If you are on the phone, press *6 to mute/unmute.
• Please rename yourself – Breakout (BB or MM), Name, Affiliation, Breakout Group (Birds/Bats OR Marine Mammals/Other)
  “BB, Laura Singer, Facilitator”
• Raise your hand, use the blue "Raise Hand" function in the participants tab. If you are on the phone, press *9. Or just raise your hand on the screen.
• Use "Chat" function to ask questions as well and share information.
• Technical assistance: Zoe Miller
  zmiller@cbi.org
Navigating Our Discussion

- Be attentive to today’s objectives.
- Focus on task at hand (avoid multitasking).
- Both questions and comments welcome.
- Listen to learn and speak to share expertise.
- Share the floor: Please be mindful of your time to allow others to speak.
- Be direct and respectful: Express your views and let others do the same.
- The session will not be recorded.
## Research Array Process Elements

| State of Knowledge Workshop | • Setting stage  
• Building common information |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Webinars</td>
<td>• Build understanding across sectors</td>
</tr>
<tr>
<td>Work Sessions Fisheries Wildlife</td>
<td>• Detailed dialogue on data, siting, and research approach</td>
</tr>
</tbody>
</table>
| Dockside and Informal     | • Direct engagement with fishermen  
• Direct engagement with interested others |
| Joint workshops           | • Coordinating and refining advice from wildlife, fisheries and other |
Provide advice and counsel to the State to help guide its decisions involving

1. the siting of the research project area and its configuration,
2. research themes of interest for the research project to learn from, and
3. other relevant project design elements to be considered for the research lease application.
Wildlife Work Sessions

<table>
<thead>
<tr>
<th>March 5: Meeting #1</th>
<th>March 26: Meeting #2</th>
<th>TBD – Joint meeting with Fisheries</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What data do we have?</td>
<td>• Review additional data and initial finding from fisheries</td>
<td>• Hone further siting considerations and pros/cons</td>
</tr>
<tr>
<td>• What’s missing?</td>
<td>• What are better and worse areas? Why?</td>
<td>• Review and discuss baseline data needs in advance of project design and construction</td>
</tr>
<tr>
<td>• How and what could we get during this process?</td>
<td>• Explore layout considerations to minimize interactions</td>
<td>• Review and discuss possible research focus and questions for the array itself</td>
</tr>
<tr>
<td>• Initial discussion of high, moderate or low potential for interaction</td>
<td>• How might turbines be placed inside the site?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What is the research approach and key questions?</td>
<td></td>
</tr>
</tbody>
</table>
Objectives for Today

- Set expectations and goals of working sessions
- Understand what data is currently available to determine which species are present in the research area of interest, focusing on those populations most vulnerable
- Generate ideas for additional data sets that may be useful to consider to inform siting
Wildlife Work Session #1

Agenda

1:30 Welcome and Overview
1:45 About Maine’s Research Array
2:00 Understanding Data to Inform Siting Considerations
3:00 Break
3:15 Breakout Session
• Birds & Bats
• Marine Mammals
4:00 Report Back
4:20 Wrap Up & Next Steps
Maine’s Offshore Wind Initiative

Celina Cunningham, Deputy Director
Governor’s Energy Office
CLIMATE COUNCIL GOALS

12.01.20
Climate Action Plan Delivered

ACHIEVE STATE CARBON NEUTRALITY BY 2045

REDUCE MAINE’S GREENHOUSE GAS EMISSIONS BY TARGETS OUTLINED IN STATE LAW

45% BELOW 1990 LEVELS BY 2030

80% BELOW 1990 LEVELS BY 2050

ENSURE MAINE PEOPLE, INDUSTRIES, AND COMMUNITIES ARE RESILIENT TO THE IMPACTS OF CLIMATE CHANGE.
Offshore Wind in Maine
Maine Offshore Wind Initiative

- Pursues strategic opportunities for additive economic activity and innovation across various sectors and regions of Maine
- Maximize compatibility with existing marine uses and fisheries and take a data-driven, inclusive, transparent approach
  - Maine fisheries: $674M in Maine’s commercial fishing landings in 2019 ($485M in lobster landings alone, most valuable single species fishery in US); 2X commercial fishing trips out of Maine than any other state on the east coast
- Support Maine engagement in BOEM Task Force and regional coordination

Maine’s Floating Offshore Wind Roadmap

October 2020
US EDA Grant: $2.167 million for a strategic roadmap to develop offshore wind industry in Maine, focusing on:
- Ports and infrastructure
- Manufacturing, supply chain, workforce
- Innovation
- Research array and research priorities
- Ocean and environmental data
- Stakeholder engagement
Maine Offshore Wind Projects

2013
- 1/8 Scale Pilot Project - 1 turbine (Castine - UMaine, Cianbro, MMA)

2023
- 10 MW Demonstration Project - 1 turbine (Monhegan - NEAV LLC, UMaine)

2025+
- Research Array - 12 turbines or less (State, UMaine, NEAV LLC)

TBD*
- Commercial Development - BOEM Leasing and Permitting
University of Maine Technology
Optimized for Maine

• Can be built in Maine
  – Concrete / not steel
  – Modular construction
  – Creates jobs in Maine

• Fits Maine’s waters
  – Suited for mid-depth waters
  – Very stable & shallow draft

Common modular construction

...Applied to floating offshore wind
Research Array
By the Numbers

12 floating turbines or fewer
16 square miles or smaller
State of Maine

- Governor's Energy Office (lead)
- Department of Marine Resources
- Governor’s Office of Policy Innovation and the Future
- Department of Inland Fish and Wildlife
- Department of Environmental Protection
- Department of Economic and Community Development
- Consensus Building Institute (Consultant - Facilitator)

New England Aqua Ventus

- Diamond Offshore Wind/RWE Renewables

University of Maine

- Technology

Federal Agency and MA/NH State Agency Coordination

Who is Involved?
Maine’s Pathway to a Floating Offshore Wind Research Array

November 2020 – winter/spring 2021
Engagement and Outreach with fishing industry and other interested parties on siting and potential research questions.

November 2020
Maine announces intent to pursue research lease.

2021
Application Submitted and Processed
- Maine submits research lease application
- BOEM issues request for information
- BOEM reviews application

Years 1 – 2
Research Lease Issued

Years 2 – 4
Permitting and Approvals
Further project planning in consultation with fishing industry and federal, state and local approvals, including NEPA review with opportunity for formal public comment.

Years 1 – 4
Research Consortium Developed in partnership with state and federal agencies, fishing industry, universities, research institutions, and others to define research agenda and secure project funding.

Year 5+
Construction and Installation

Research Projects Underway

* Dates approximate
In response to fishing industry concerns, Gov. Mills announced the following:

- Support for 10-year moratorium on new offshore wind in state waters
- Additional time for planning and discussion, prior to lease application
- A review of applicable state laws
Siting Criteria
Initial Siting Criteria

- 20-40 statute miles offshore
- 150 feet of water or deeper
- Southern half of ME interconnect
- Bottom type gravel and/or mud
- Minimal conflicts with known fishing grounds
- Avoid highly trafficked areas
- Limit visibility from shore
Research Array
General Area of Interest
Site Selection Process

1. Identify general area
2. Eliminate and refine areas based on multiple inputs ~16 sq miles

Baseline Criteria
(distance to shore/grid connection/water depth/wind speed/exclusion areas)

Initial GIS Data Collection and Analysis
(publicly available data on fisheries, habitat, transportation, bathymetry, geology, military, shipwrecks, etc.)

Fishing Industry Engagement
(Information on intensity of use, value, seasonality, diversity of fisheries for site selection and input to research framework)

Wildlife Engagement
(Information on species, risks, potential impacts for site selection and input to research framework)

State and federal agency consultation

Other interested parties: Tribes, USCG, maritime industries, academia, etc.
Research Approach
Research Approach

• Research is the key driver for the array.
• Research objectives will inform:
  • Siting process and decision
  • Project design, layout and operations

Overall research process:
• Key themes in initial application
• Further develop research approach through roadmap effort
• Stand up formal consortium, with diverse interests at the table
• Seek broad funding opportunities
• Open source data
Research Approach

- Environment and ecological interactions
- Interactions with fishing activity
- Navigation
- Technology research and demonstration, including mooring systems
- Workforce education and training
- Others?
**Key Questions:**

1. Determine if there available, relevant, additional data that can be used to inform siting considerations for wildlife. Both presence/absence and habitat features of interest.

2. What does initial data tells us about areas of high, medium or low potential for interaction?

3. Beyond threatened and endangered species, are there species that may be particularly vulnerable to potential hazards that should be considered?

4. What do we need to do before next session to advance this siting effort for wildlife considerations?

**Zoom Navigation:**

- BEFORE BREAK: Self-select either Birds/Bats or Marine Mammals/Other Breakout groups and GO to Group before they grab coffee, etc.
- If you can’t self-select, Zoe will work with you in the main Zoom room (plenary) to select for you
- Chat with Zoe on selection or other technical issues
Wildlife Work Sessions Timeline

March 5: Work Session #1 – Diving into Data

March 26: Work Session #2 – Considering Data & Exploring Research Questions

Compiling Additional Data

TBD: Joint Workshops with Fisheries
How Do I Stay Informed and Provide Additional Input?

For information: www.maine.gov/energy/initiatives/offshorewind

Questions? offshorewind@maine.gov

Additional Input on Wildlife?
Amanda Cross
Wildlife Resource Supervisor, Department of Inland Fisheries & Wildlife
Amanda.S.Cross@maine.gov
(207) 592-4967