Maine Offshore Wind Research Consortium
Advisory Board
Meeting Summary

Wednesday, August 13, 2025
1:00PM – 4:00PM EST

Hybrid meeting
In-person: Maine Maritime Academy, Castine, ME
Alfond Student Center, Harborview Room

Meeting materials are available here.

Meeting Objectives

On August 13, 2025, the Maine Offshore Wind Research Consortium (the Consortium) Advisory Board (AB) held a hybrid meeting at Maine Maritime Academy (MMA) in Castine. The objectives of this meeting were to:

- Receive brief updates on Research Consortium activities and relevant Maine research
- Discuss candidate research project scopes for Round 3 Funding
- Initiate Advisory Board ranking of research projects

Welcome & Introductions

Advisory Board welcomed to MMA by Craig Johnson, President of MMA. Opening remarks given by Alison Bates, co-chair of the Consortium. Katy Bland, Program Manager (Maine Sea Grant) reviewed the meeting agenda and objectives and gave a brief overview of the meeting guidelines.

A list of AB members who attended the meeting can be found in Appendix A.

Programmatic Updates

Katy offered a reminder that the AB Member survey is still open and encouraged those who've not yet completed it to do so. Thus far, some of the feedback from the survey emphasized a request to better understand the many different roles within the Program Management (PM) team. In response, Katy shared a slide detailing the team's organization and affiliations (see slide #7 for more detail).

Fishermen's Trip to Scotland

Meghan Suslovic (Governor's Energy Office/GEO) provided a brief overview of the recent fishermen's trip to Scotland, organized by Carbon Trust and Sambas Consulting, that took place in May 2025. The purpose of the trip was to bring Maine-based fishermen to Scotland in an effort to learn from their experience with floating offshore wind (FOW). Carbon Trust and Sambas Consulting worked with GEO to apply for and receive funding through a Maine-based private foundation. The trip resulted in several members of Maine's fishing industries (including lobstermen, pelagic fishermen, and groundfishermen), as well as staff from the Department of Marine Resources (DMR), GEO, and MA Department of Marine Fisheries (DMF, self-funded) travelling to Scotland to:

- Establish a common understanding of FOW technology

- Understand the status of FOW development in Scotland, including planning and policy, science and research, and engagement with the fishing industry
- Learn about Kincardine FOW project, focusing on the technology employed, the design and installation process, and the engagement with the fishing industry and wider coastal communities during its development
- Exchange best practices for assessing and mitigating the impacts of FOW development on the fishing industry and wider coastal communities

Trip attendees met with the Scottish government; OSW developers Ocean Winds, Orsted, and SSE; FloWave Research Institute at the University of Edinburgh; Peterhead Port Authority; and the Scottish Fishermen's Federation.

Erin Wilkinson (DMR), who also attended the trip, commented that the highlight of the experience was the visit to the Kincardine FOW Farm, which has 5 floating turbines ~15 kilometers offshore. Erin noted the lengthy process it took to build and transport the turbines and how it highlighted the infrastructure needs that are necessary to develop and deploy the technology. Erin also shared thoughts from Dan Salerno, an Advisory Board member, who visited the farm but was unable to attend the August 13 AB meeting. According to Dan, approaching the wind farm didn't feel overwhelming, but the Kincardine layout may be different from what we see in Maine. Dan also noted that many of the fishermen were impressed that they were unable to tell the turbines were floating, even in the 6-8 foot seas with high winds that participants experienced. More of Dan's key takeaways are found on slide #13 and higher-level takeaways from the attendees are summarized on slide #14.

An AB member asked if Scotland was doing any research using the floating platforms, or if the government is funding any work in that area. Response that trip attendees didn't hear about government funded research at Kincardine, but Olivia suggested that she could connect the University of Maine with her contacts from Kincardine to see if they can share any research happening with their units.

RELEVANT MAINE RESEARCH UPDATES

University of Maine's Volturnus+ ¼ scale test bed
Anthony Viselli, AB member and Chief Engineer for Ocean Energy and Engineering at UMaine's Advanced Structures and Composites Center (ASCC), provided an update on the VolturnUS+ demonstration unit. The unit is primarily funded through an ARPA-E award granted by the Department of Energy (DoE). The competition seeks to advance technology that can significantly lower costs of different energy systems, including FOW. Anthony explained that demonstration projects such as this one are what enable new turbine technologies to get used commercially; that is, they undergo third-party review and validation of the floating concrete technology.

The construction and launch of the foundation was completed on March 30, 2025, after which it was towed to Searsport for turbine integration, and then towed to Castine where turbine commissioning is underway. To fulfill federal permit requirements, the turbine already carries load sensors, accelerometers, turbine health and operational status monitors, platform wave measurements, a small wave buoy, and load cells to measure load tensions in the mooring lines. Additionally, the Biodiversity Research Institute (BRI) has mounted acoustic bat sensors on the unit. GEO has also released a Request for Applications (RFA) for additional research, which is expanded on below. Anthony noted that the University of Maine is still interested in employing additional sensor technology on the turbine, as long as it doesn't pose additional permit requirements or limitations.

Upcoming research at the ¼ scale turbine
Damian Brady, AB member and Professor of Oceanography at UMaine's Darling Marine Center, provided an update on his upcoming project (not funded through the Consortium) to understand how fishing gear moves in relation to the mooring systems at the ¼ scale turbine. Working with fishermen in Penobscot Bay, he and his team will be using five-trap trawls and a distance-weighted approach to safely monitor gear drift around the turbine. The goal will be to identify means to detect gear interaction with mooring systems and determine safe distances to prevent secondary entanglement of gear on mooring systems.

GEO's open competitive solicitation to advance BlueTech at ¼ scale demo
Stephanie Watson (GEO) shared that GEO recently posted a Request for Applications (RFA) to conduct additional research at the ¼ scale turbine over the next year of its deployment. The RFA is intended to test innovative BlueTech and monitoring at the site related to research topics discussed by the Consortium. The RFA can support up to $380,000 of research. Stephanie explained that the funding for this RFA did not come from the Consortium's budget. Proposals are due on September 17, 2025. More details for the RFA can be found on the state grants website by searching for RFA #202507101.

CONSORTIUM RESEARCH UPDATES

Meghan provided an overview of the Consortium's funded projects to date. In Round 1, three projects were funded to 1) compile a socioeconomic baseline inventory, 2) explore definitions and considerations for coexistence between fisheries and FOW in the GoM, and 3) conduct seafloor mapping. The first two projects are fully complete and the seafloor mapping project is expected to wrap up in fall 2025.

Round 2 projects, which were identified and prioritized by the AB throughout 2024, are in the final stages of contract negotiation and expected to kickoff in fall 2025. The three projects will result in (1) a baseline assessment of social, economic, and cultural impacts of FOW development on Maine's fishing industry, (2) a baseline secondary entanglement risk assessment and technology feasibility study, and (3) a baseline offshore bat monitoring assessment.

Meghan also shared that the data portal is advancing and should be completed early next year. The data portal project involves working with the Regional Wildlife Science Collaborative (RWSC) and builds on existing efforts to centralize access to various data repositories like NABat, OBIS SEAMAP and others and creates a landing page for Maine OSW research.

PROJECT PRIORITIZATION DISCUSSION

Olivia Burke (Carbon Trust) led the project prioritization discussion to identify high-priority research areas that will lead to a state research solicitation later this year. The four research areas in the Consortium's research scope are co-use and co-existence; impacts on wildlife; socio-economic aspects; and technological considerations. Nine projects were categorized within these research areas and discussed in the meeting, although AB members were encouraged to consider how separate projects may find synergies with other projects.

Olivia provided an overview of the research prioritization process that has taken place this year. The process began in February 2025, when small, informal group working sessions (mini-workshops) developed project ideas that align with the priority research topics. Olivia then arranged follow-up discussions with AB members and Collaborators. Discussions from the calls guided the development of more detailed one-pager summaries for potential projects in the areas of highest priority. These one-pagers will be used to prioritize work for the next state research

solicitation and/or as a starting point to receive external funding. This provides flexibility to apply for funding or develop projects with external partners throughout the year.

For each of the research areas identified, Olivia shared slides that summarized the preliminary project details and suggested possible research questions. Discussion took place among the AB members about research questions and what types of projects could help answer those questions. AB members also offered background knowledge, related work happening elsewhere, concerns they had about certain potential projects, and suggestions for best practice.

Project ID 15 – Terrestrial endangered species bird tracking study in the Gulf of Maine
Summary of 1-pager (see slide #26 for more detail):

- Budget: $330,000 - $450,000 (depending on duration)
- Duration: ~3 years
- Research Area: Impact on ecosystems
- Objectives:
    - Plan and conduct a tracking study to examine how specific bird species move through the GoM
    - Understand the ecological baseline in the GoM for specific bird species and how OSW development could impact this, with mitigation techniques to communicate to Statutory Nature Conservation Bodies (SNCB) for future monitoring requirements

Summary of AB discussion:

- Suggestion to change language from "endangered" to vulnerable. Additional suggestion to employ the term "non-marine" as opposed to terrestrial birds.
- Suggestion to focus on migratory bird guilds.
- Comment that, with OSW development slowing, there is an opportunity to fill data gaps that could inform commercial lease areas and the Maine Offshore Wind Research Array (MeRA) and help to streamline development in the future. Additional comment that, while there will likely be requirements for individual lease holders to do some of this work in individual lease sites, understanding the broader context of how birds move in the GoM is still critical.
- Question about scale: is this a site-specific project focused on the MeRA? Would it require more Motus towers and nanotags? Response that this project would track bird movement throughout the GoM, and that the tag-type will be species-dependent.
- Question about if the scope of the project would cover birds migrating from Europe into US waters. Response that, from the state's perspective, there is jurisdiction over terrestrial birds, and that offshore species have yet to be determined. Additional response that the study would generally focus on north-to-south movement rather than east-to-west movement.

Project ID 21 -- Forecasting marine species distributions in the Gulf of Maine
Summary of 1-pager (see slide #27 for more detail):

- Budget: $250,000 - $350,000
- Duration: 12-18 months
- Research Area: Impact on ecosystems
- Objectives:
    - Host an expert workshop to synthesize existing work that has focused on modeling forecasted species and habitat change in the GoM, and identify data gaps in relation to the interface with OSW

    - Based on the outcome(s) of the workshop, update, adapt or develop a model (likely VAST) to account for priority species where there is limited information, at sites where offshore wind will likely be constructed
- Updates since previous discussion:

Since the May 12 AB meeting, the PM team had follow-up conversations with the National Oceanic and Atmospheric Administration (NOAA), the Bureau of Ocean Energy Management (BOEM), DMR, and the Gulf of Maine Research Institute (GMRI) to better understand the current research landscape and identify possible gaps. There are a number of modelling efforts underway that are evaluating target species in lease sites in Maine, but there is disconnect between the various efforts. Suggestion to hold a workshop to bring researchers together for a robust conversation around modelling efforts to ensure efficiency. The current 1-pager reflects these discussions and suggestions. The budget reflects the possibility of creating or amending a model, or if there is a need, to build in current data.

Summary of AB discussion:

- Comment that there are many various efforts related to modelling and distribution in the GoM, and this presents an opportunity to be more strategic about pursuing some of these proposals. Comment that the first phase of synthesizing these efforts is a valuable undertaking that can move us toward a more pointed modelling effort in the future. Comment that many of the efforts currently underway are more related to static distributions based on trawl surveys, whereas the scope of the 1-pager examines more dynamic fish distributions.
- Question about if the focus on "marine species" is too broad and should be narrowed to "marine fish species." Response that the intent is to focus primarily on fish species, including pelagic and highly migratory species (HMS). Suggestion to add "fish" to the title for clarity.
- Question about if this project would focus on commercial or recreational species. Suggestion to discuss this question at the workshop.
- Comment that NOAA and BOEM are evaluating data sets of different fish species, but not all are commercial. Comment that there have been no efforts to synthesize all of this work in a single place.
- Comment that this 1-pager seems to have synergies with Project ID 25 on improving ecosystem models. Comment that this was a topic at the last New York State Energy Research and Development Authority (NYSERDA) State of the Science meeting. Several institutions, including Rutgers, are doing predictive forecast modelling. With so much work being done in this space, there is a need to link efforts and focus on a particular species and/or complex of species, as forecast models will be species-specific.
- Comment that this project should not solely focus on fish because fish follow other things (i.e., prey). If this project is about fish, and the other focuses on ecosystem, we will miss discussing the ecosystem drivers. Recommendation to change the scope to include pelagic species so as to not ignore plankton and whales. Further recommendation that this could be a point of discussion at the workshop.

Project ID 25 – Filling gaps to improve accuracy of baseline ecosystem models in the Gulf of Maine

Summary of 1-pager (see slide #28 for more detail):

- Budget: $100,000 - $400,000 (depending on scope of proposal)
- Duration: ~6-12 months
- Research Area: Impact on ecosystems

- Objectives:
    - Host an expert workshop to synthesize existing work and identify data gaps, potential scopes, and goals of future modeling efforts
    - Based on workshop outcomes, improve model(s) used to represent atmospheric, hydrodynamic, and/or biogeochemical processes in the GoM
- Updates since previous discussion:
    - At the time of our initial discussion in May, this project was scoped to focus specifically on improvements to hydrodynamic models. Since then, there have been many conversations to understand other ongoing work, with suggestions to look more holistically beyond hydrodynamic models. With so many different modelling efforts underway, and at different resolutions, there is a need to convene experts to explain what they think would be the highest priority improvement to those models. This would allow us to capture the baseline which will be necessary to understand future OSW impacts.

Summary of AB discussion:

- Comment that a workshop with experts could help us identify what the gaps are and help us understand what would need to be done in the field to understand OSW impacts. Suggestion to refer to the National Academies' Nantucket Shoals work to guide the design of a workshop that emphasizes conditions specific to the GoM.
- Comment that if the goal is to forecast marine species, it will require NOAA trawl survey data from 1978-present to develop species maps. However, spatial resolution of trawl survey data is hard to apply to a particular wind farm in a specific location.
- Comment that, in terms of the distinction between this project and Project ID 21, the latter cannot model the potential OSW impacts to habitat characteristics. This project, on the other hand, attempts to understand how impacts from OSW might alter habitat which could help make an estimation for a forecast. Comment that this project is more likely to result in a forecast than Project ID 21.
- Suggestion to make strong distinction between this project and Project ID 21. The ability to forecast impact of changes is entirely different than Project ID 21, which models existing fish distributions and how those might change.
- Question about if we know what data gaps are missing to improve our understanding of the current environment. Response that there are no FOW turbines in the water, so we don't currently understand the impact that 10-15 turbines may have on ocean currents.
- Comment that the scope of this project needs to be further refined to ensure more focused and narrow workshop discussion.

Project ID 73 – Longitudinal impact assessment of cultural identities of a fishing community

Summary of 1-pager (see slide #29 for more detail):

- Budget: $75,000 - $150,000
- Duration: ~18 months
- Research Area: Socio-economic
- Objectives:
    - Develop a methodology for collecting baseline cultural identity data for future longitudinal assessment
    - Design flexible, long-term study protocols to track cultural identity changes over years/ decades under various future scenarios
    - Create frameworks to distinguish OSW-related cultural changes from those due to climate, regulation, etc.

Summary of AB discussion:

- Question about if the target community will be specific to Maine or the Gulf of Maine. Response that the scope of this study is intentionally broad so as to not foreclose any possibilities. However, this level of detail would need to be determined by the AB or SC in follow-up discussions if the project is ranked highly.
- Question about if this project would include tribal communities. Response that, if welcomed by the tribes, this project could have that specific scope, but it will be important to ensure that tribal governments are co-collaborators in the study design. Follow-up response that tribes and other communities should not be lumped together in one project, but should remain distinct.
- Question about the meaning of longitudinal study. Response that longitudinal studies are undertaken for multiple years and ideally decades. Follow-up response that this project, as proposed, is not to perform the longitudinal study, but rather is to design study protocols.

Project ID 75 - Community Planning for a Distinct Target Community

Summary of 1-pager (see slide #30 for more detail):

- Budget: $75,000 - $120,000
- Duration: 12-18 months
- Research Area: Socio-economic
- Objectives:
    - Support a to-be-determined community in developing a comprehensive plan to understand, navigate, and benefit from OSW opportunities.
    - When timely and appropriate, engage with Maine Office of Community Affairs (MOCA), Maine Climate Council, and/ or other agencies/ programs and tribal governments to leverage funds and efforts.

Summary of AB discussion:

- Comment that while this is a valuable study, it would be more prudent to do at later time when state and multi-state efforts to support communities' energy needs are underway.
- Question about how to determine which coastal communities will be more or less impacted by OSW development. Would this be ports where construction/assembly occurs or the community where cables land? Response that this would need to be determined by the AB or SC, and results from the recently funded socio-economic project from Round 2 Prioritization may provide insight into community selection.

Project ID 51 - Regional coordination to communicate the potential economic impacts under different scenarios of offshore wind deployment

Summary of 1-pager (see slide #31 for more detail):

- Conduct a desktop analysis of different OSW deployment scenarios to evaluate their effects on key economic drivers
- Assess the potential consequences of missed investment opportunities and provide evidence-based recommendations for future policy development
- Communicate the outputs to decision makers to inform policy decisions

Summary of AB discussion:

- Comment that while an interesting project, the uncertainty around deployment timeline and ever-changing conditions, both regionally and nationally, this work doesn't seem particularly prudent.

- General agreement to put this project on pause, but the AB is still welcomed to include it in their rankings.

Project ID 35 – Desk-based review of scour risks from moorings and anchors on the benthic environment

Summary of 1-pager (see slide #32 for more detail):

- Budget: $100,000
- Duration: 5 months
- Research Area: Impact on ecosystems
- Objectives:
    - Identify the types of anchor and mooring systems most suitable for seabed characteristics in GoM
    - Review existing literature to understand the likely scour impact from these anchors and associated components, and the potential impact on the benthic environment
    - Identify mitigation measures and any potential impact on the benthic environment
    - Where possible, describe the end-of-life benthic impacts
- Updates since previous discussion:

The scope of this project would likely focus on a literature review to understand the state of knowledge and research as they relate to the benthic environment, potential scour impacts, and possible mitigation strategies. The budget could be reduced for this type of literature review.

Summary of AB discussion:

- Question about if this is the type of project the state should take on. Is this the best use of state resources? How unique are conditions in the GoM to justify doing this work here?
- Comment that this type of study will be performed by developers, and uncertainty around the types of mooring and anchorings will change the study design.

Project ID 24 -- Potential environmental effects from offshore wind electrical infrastructure

Summary of 1-pager (see slide #33 for more detail):

- Budget: $70,000 - $100,000
- Duration: 12 months
- Research Area: Impact on ecosystems
- Objectives:
    - Conduct a desk-based study to investigate the environmental impacts from offshore wind infrastructure including cables and cooling stations
    - Investigate the characteristics and spatial distribution of electromagnetic fields (EMF) emitted by subsea cables in offshore wind farms, focusing on EMF propagation vertically and horizontally through the water column and sediment, specifically in relation to floating offshore wind and sediments typical of the GoM
    - Investigate existing offshore wind substation cooling water systems and assess their potential environmental impacts

Raise awareness of potential EMF exposure and cooling processes on marine life in the GoM, identify knowledge gaps, and help outline future research opportunities

Summary of AB discussion:

- Suggestion to add “transmission cable” to ensure inclusion of an assessment of export cables, which we might expect to see coming from Canada in the near future.
- Suggestion to broaden the scope to reflect different types of transmission, including HVAC,

HVDC, and EMF. Agreement that it would not be prudent to limit this study solely to high voltage, as inter-array cables could be stepped-down in the future. Suggestion to include all electrical infrastructure, including HVDC, HVAC, and lower-voltage inter-array cables.

Project ID 60 -- Floating Wind Sensor Demonstrator: 1/4 Scale Monitoring Test Bed

Summary of 1-pager (see slide #34 for more detail):

- Budget: Variable
- Duration: 6-12 months
- Research Area: Technology
- Objectives:
    - Accelerate the development of scalable, marine-ready solutions by providing an accessible environment (VolturnUS+ platform) to test technologies and collect additional data (above and/or below water).
- Updates since previous discussion:
    - GEO has announced an RFA to accomplish this. If the Consortium would like to see additional work done with the ¼ scale turbine, the scope would need to be different than that of GEO's recent RFA. Alternatively, the Consortium could consider augmenting the RFA budget to enable additional sensor testing.

Summary of AB discussion:

- Comment that, because the turbine is only permitted for 1 year, contracting an additional project at the VolturnUS+ test bed would not likely fit into the current timeline.
- Comment that there may be an option to leverage additional Consortium funds to support GEO's RFA.
- Comment that UMaine is open to considering additional opportunities. There has been more interest in utilizing the test bed since the RFA was announced.
- Comment that the test bed presents an opportunity to advance more socio-cultural research around topics such as social acceptance, information access, etc. This type of work wouldn't require a lot of funds, but could support ethnographic research that engages with both land owners and ocean users.

APPENDIX A – PARTICIPANTS

Advisory Board Members

Terry Alexander, F/V Jocka, Co-Chair*
Alison Bates, Colby College, Co-Chair
Damian Brady, University of Maine
Julian Fraize, ABB
Wing Goodale, BRI
Sarah Haggerty, Maine Audubon
EJ Marohn, Invenergy
Fred Moore, Pleasant Point Passamaquoddy Reservation
Laura Morse, JASCO
John Perry, MDIFW
Rebecca Peters, DMR
Graham Sherwood, GMRI
Mary Beth Tooley, O'Hara Corp*
Anthony Viselli, University of Maine
Stephanie Watson, GEO
Gayle Zydlewski, Maine Sea Grant

Program Management Staff

Beth Bisson, Maine Sea Grant
Katy Bland, Maine Sea Grant
Olivia Burke, Carbon Trust*
Julia Hiltonsmith, Maine Sea Grant
Laura Singer, SAMBAS Consulting LLC*
Meghan Suslovic, GEO

*Denotes online attendance
Additional observers attended in person and online.

APPENDIX B – ZOOM CHAT SUMMARY

Project-specific comments from AB members and collaborators are included in the respective project discussion summaries.

- Comment sharing a recent paper (Harris et al. 2025) about ecological research on Scotland wind sites: https://www.sciencedirect.com/science/article/pii/S0025326X2500534X
- Question about how the results from the forecast models will be used in decision making. Response that, realistically, this work could inform various parties who have decision making capabilities. It could inform or expand work that NOAA is undertaking and/or it could help understand where there are gaps for more in-situ data collection.
- Comment that RWSC may be thinking about doing a modeling/observations workshop associated with their pending awarded project. Suggestion to reach out to Emily Shumchenia to consider a joint workshop format.