



Responsible Offshore Development Alliance

February 22nd, 2021

Ms. Amanda Lefton, Director
Bureau of Ocean Energy Management
45600 Woodland Road
Sterling, Virginia 20166

Re: Notice of Public Meetings and of Availability of a Draft Environmental Impact Statement for Deepwater South Fork LLC's Proposed Wind Energy Facility Offshore Rhode Island; Docket No. BOEM-2020-0066

Dear Director Lefton:

The Responsible Offshore Development Alliance (RODA) submits the following comments regarding the Bureau of Ocean Energy Management's (BOEM) Draft Environmental Impact Statement (DEIS) for the South Fork Wind Farm (SFWF) and South Fork Export Cable (SFEC) Project.¹ RODA is a national membership-based coalition of fishing industry associations and fishing companies committed to improving the compatibility of new offshore development with their businesses.

This DEIS comes before the public at a time of significant confusion and change in the U.S. approach to offshore wind energy (OSW) planning. The document itself is replete with errors including missing information, unmatched cross-references, conclusions unsupported by citations, analytical inconsistencies, and outdated facts. Its quality marks a significant step backward from the more detailed analysis contained in the Supplemental EIS for the Vineyard Wind project, which was released last summer but relegated to a state of great procedural uncertainty before public comments were incorporated. RODA welcomes you into your new position as BOEM director and urge you to improve the broken federal OSW process before consideration of additional projects or lease announcements.

First and foremost, we request that BOEM work with its sister agencies and *all* parties with an interest in the U.S. ocean to create an improved national strategy for the "Blue Economy" that prioritizes food security, environmental protection, and participatory governance. To be effective, this would need to go hand-in-hand with a comprehensive energy plan that provides transparent information regarding energy production, costs, and grid and transmission considerations for OSW as part of an overall strategy. In the meantime, should BOEM move forward with the approval of individual projects before such a critical plan is developed, the following should be adopted as minimum conditions:

- Provide adequate transit lanes of 4 nm through the MA/RI wind energy areas (WEA), and similarly adequate widths for other leases that may merit different site-specific requirements;
- Develop and require a comprehensive, science-based, inclusive, and predictable plans for compensatory mitigation of impacts to fishing communities;
- Work closely with the fishing industry to determine methods to improve the timeliness and utility of communications regarding OSW in culturally appropriate formats;
- Implement a standardized process for gear loss claims;
- Improve documents created under the National Environmental Policy Act (NEPA) to incorporate better analysis and clearly identify information that is unknown;

¹ 86 Fed. Reg. 1520 (Jan. 8, 2021).

- Provide answers to longstanding questions regarding radar interference from turbines to marine radar and ensure that all appropriate mitigation efforts are required;
- Ensure that all OSW projects incorporate adequate deicing technology and practices;
- Require OSW developers to determine “micrositing” of turbines and cables based on transparent negotiations with fishermen who know the ocean best;
- Prohibit placement of turbines in sensitive habitat including spawning areas and high-value fishing grounds;
- Require robust fisheries monitoring for the life of OSW projects, including during site characterization activities and past decommissioning, and utilize adaptive management to incorporate lessons learned into future OSW decisions;
- Fully fund mitigation of impacts to National Marine Fisheries Service (NMFS) fishery-independent surveys, including likely replacement of survey effort through cooperative research with fishermen;
- Perform thorough analyses on the cumulative impacts of OSW to right whales, particularly in the MA/RI WEAs, including all project phases and ensure that no take occurs for any reason;
- Take clear and decisive action to ensure that any benefits of OSW accrue to the U.S.—not in the future, but now—and that any job creation or coastal redevelopment does not displace existing industries and protects coastal cultures and traditions;

RODA appreciates the efforts made by BOEM staff to improve the inclusion of fishing communities in the existing OSW leasing regulatory process and we look forward to growing and expanding upon these critical activities.

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I. STANDARD OF REVIEW

On December 14th, 2020 the Department of the Interior (DOI) issued an internal legal memorandum interpreting its statutory mandate to prevent OSW's interference with fishing. Previous DOI guidance on the Outer Continental Shelf Lands Act (OCSLA) statutory language, which requires "prevention of interference with reasonable uses [including fishing] of the exclusive economic zone, the high seas, and the territorial seas," indicated that offshore renewable energy projects could not interfere with the legal right to fish. This new memo explicitly changes that guidance, saying "[n]owhere does the statute indicate that the Secretary is only to prevent interference with the legal right to navigate or fish in an area. It is the Secretary's job to provide for the prevention of interference with those uses." In short, it states: (1) that the Secretary must ensure that offshore wind energy projects do not unreasonably interfere with fishing operations; (2) that fishermen's perspectives are part of what determine whether interference is unreasonable; (3) that such interference is considered on a cumulative instead of project-specific level; and (4) if in question it must err on the side of less interference rather than more. This guidance fundamentally shifts the lens with which projects must be evaluated.

The DEIS does not provide public notice or guidance as to how this clarification regarding interpretation of OCSLA will be applied to BOEM's review of the SFWF Construction and Operation Plan (COP). As BOEM has never conducted the planning process for OSW with the goal of preventing unreasonable interference to fishing, current project plans including SFWF have not been designed to do so. The lack of mitigation alternatives in the DEIS for most of the project's impacts is clear and incontrovertible evidence of the failure to prevent such interference in accordance with the law.

II. SCOPE AND PROCESS

The scope of the DEIS is deficient because it is too narrow to provide a meaningful evaluation of alternatives. The process for the development and review of this project has been—and remains today—nothing short of chaotic. The DEIS does not meet basic requirements of NEPA and OCSLA, fails to consider several issues raised during the scoping process, and does not cure structural flaws in the OSW planning process.

a. Need for Holistic National Strategy

"I do not believe that expanding the utility of our oceans should be the death knell of the most dependable economic engine in our nation's history." (New England fisherman, February 2021).

The situation RODA presently finds ourselves in--reviewing what, according to the public record, would be the first federal waters OSW project approved in the U.S.--unfortunately does not to our knowledge leave any commercial fisherman with optimism, excitement, or hope. Fishermen have collectively spent thousands of hours attending meetings and working in good faith with BOEM, developers, states, and others to participate in the OSW process. Yet, the fact remains that the process is one-sided, heavily biased toward the (much more powerful) developers, and riddled with lost opportunities for co-planning and mitigation. Everything from the structure of public meetings to the availability of research funding is stacked in a way that enables OSW advocates to receive all of the resources. In contrast, fishermen are--quite literally--referenced as mere "stakeholders" of OSW and repeatedly asked for their "reactions" to decisions made behind closed doors, or to participate in research activities that do not follow cooperative research design principles. This is not the way to welcome a potentially massive new industry to our shores and waters.

To repeat, optimizing the value of our ocean resources to meet multiple public interests including food security, thriving coastal economies, biodiversity conservation, habitat protection, and energy production

cannot be adequately addressed through the NEPA process alone. Nor can it be entrusted to large energy companies to “do the right thing”. BOEM has only conducted this DEIS at the penultimate stage of project permitting, and decision points in it are limited to those with a federal nexus.² Without a comprehensive strategy for developing a “Blue Economy,” systemic blind spots exist related to food production, consumption, distribution, and equity that undermine the realization of these goals.³

Ironically, OSW advocates are beginning to recognize a greater need for regional coordination in many areas except for fisheries interactions. For example, the Department of Energy issued a grant of nearly \$600k to the Clean Energy States Alliance to develop a roadmap for multistate cooperation on the topics of market characterization, job creation, and turbine installation vessels.⁴ It also awarded New York \$18.5 million to create a research and development consortium for OSW technology, which the state matched to \$41 million and has subsequently received additional large donations from other states and developers. There are many, many more examples of the huge amounts of federal and state funding spent on OSW research, and these high-profile projects have driven improved interstate coordination on these topics.

In contrast, efforts to improve the capacity of fishermen, fisheries scientists, and managers in efforts to understand and mitigate OSW interactions are under-prioritized and underfunded. This is clearly evident in the federal appropriations and federal grants processes. We are grateful to the states, OSW developers, and especially the fisheries sector members who have voluntarily committed funding toward this type of research and do not wish to discount the importance of certain ongoing studies. However, the reality is that funding, political access, and media access are heavily imbalanced between the ocean-use sectors, and this perpetuates uncoordinated and strongly divisive approaches to addressing the root problems with multi-use ocean planning. Interstate and federal/state coordination on addressing the impacts of OSW to fisheries and fishing communities is still anemic at best.

As you know, RODA has worked extensively to improve regional coordination for OSW and fisheries through collaborative efforts. RODA was a founding member of the *Responsible Offshore Science Alliance* (ROSA) and has donated substantial time and resources to its success, working with federal and state entities and OSW developers to support and bolster regional science and monitoring of the interaction between these industries. Together with these partners, we have created a structure for transparent regional research with sustained and active participation of the fishing industry. RODA also formed the “Joint Industry Task Force” in 2019 with OSW developers to promote coexistence amongst OSW energy and commercial fishing practices. The guiding principles of the Joint Industry Task Force emphasized the need to identify areas of conflict and cooperative solutions, minimize impacts to fisheries and protect coastal communities, and provide a forum for direct communication among industries. OSW developers committed funds to kick off both ROSA and the Task Force. However, due to the inherent difficulties of building relationships between two industries when each perceives the other as a direct threat, it would be beneficial for BOEM to play a more active role in these efforts.

² In reality, most project decisions for SFWF have already occurred at the state or local level, or are not regulated or subject to public review at all.

³ See Anna Farmery et al., Blind spots in visions of a “blue economy” could undermine the ocean’s contribution to eliminating hunger and malnutrition, *One Earth* VOLUME 4, ISSUE 1, p. 28-38 (Jan. 22, 2021).

⁴ <https://www.cesa.org/projects/northeast-wind-resource-center/a-roadmap-for-multi-state-cooperation-on-offshore-wind-development/>).

In order to even determine whether OSW projects, including SFWF, *could* be compatible with fishing and other current users of the space, much less *how*, a national planning policy must be implemented. This could be a single effort or series of nested efforts and should, at a minimum, have the following goals:

- To develop strategies based in science and participation in order to balance ocean uses for optimum public benefit, along with alternative strategies for mitigating climate change and their relative impacts to biodiversity and conservation;
- To generate clear information and analysis as to OSW’s potential role in a comprehensive energy policy, including: the benefits of OSW with regard to mitigating GHG emissions accounting for environmental impacts of the entire supply chain; the relative availability, price, and environmental impacts of all existing and potential energy sources; the cost of OSW projects, including subsidies; the cost and benefit of various energy policies to Environmental Justice communities and U.S. employment; electric grid requirements and an informed roadmap for successful incorporation of emerging power sources; transmission considerations for various electricity sources;
- To provide national ocean security, power reliability, and minimize foreign access to U.S. ocean space;
- To produce significantly more transparent information;
- Prioritize ecosystem protection and production, ocean health, human health, and cultural preservation;
- Plan to maximize growth across all U.S. “Blue Economy” sectors through carefully and holistically planned investment in domestic supply chains; and
- Include strong federal-state coordination and explicit strategies for effectively planning activities with multijurisdictional permitting requirements.

Such a policy would *not*:

- Include arbitrarily set OSW production goals that are not carefully calculated for environmental impact, need, grid load, price, etc.;
- Prioritize short-term investment for political gain;
- Inequitably regulate certain sectors much more stringently than others; or
- Perpetuate a piecemeal approach, thereby committing to convert large percentages of the OCS from ecological to industrial use and assume that consequences can be effectively addressed in the future.

Possible approaches to a national planning policy include, but are not limited to, the creation of a National Energy Policy, improvements to the National Ocean Policy, or a new Federal Advisory Committee Act body charged with creating recommendations. Regardless of the exact form, it is imperative that this strategic planning effort be inclusive in nature and--unlike any previous regional efforts for ocean planning or OSW planning--that a significant proportion of its participants include experts in fisheries science, management, and operations as well as fishing community leaders.

There is significant precedent for such an approach, at the appropriate permitting level (which can be federal, state, or regional) for other energy and natural resource strategies in the U.S. and abroad. For example, as you well know, BOEM manages oil and gas development through five-year plans that include comprehensive analysis and projections of national energy needs, pricing estimates, and environmental impacts. In the United Kingdom, OSW is permitted using a similar concept of national leasing rounds based on energy needs, although the accompanying analysis may be less robust. Germany, Netherlands, and other European countries have also all engaged in comprehensive ocean planning activities to place OSW in a broader environmental and ocean use context. The Rhode Island Ocean Special Area Management Plan (SAMP), for its part, was developed over many years of careful and inclusive planning and provides

informative details and strategies to balance multiple ocean uses. If combined with a comprehensive energy strategy, it could serve as a model for a more effective federal approach.

So too are there ample warning tales of what may occur in the absence of due diligence in planning new natural resource uses, from the “Gold Rush” to the oil boom, to failures in coastal resilience planning, and many more. In the words of one fisherman, “My tale is not one of obstruction but rather one of experience and the hard lessons taught by failing to understand the fragile nature of our relationship with the living ocean.” To be sure, climate change is an urgent problem, but without a comprehensive, national plan for OSW there is great peril of jeopardizing protected marine resources, food security, energy security, and national security in favor of short-term foreign investment potential in the heavy industrial use of OSW.

b. Recent Regulation and Policy Revisions

In July 2020, the Council on Environmental Quality (CEQ) updated the NEPA implementing regulations for the first time in over forty years. A new section at 40 C.F.R. § 1502.16(a)(10) requires consideration of “economic and technical considerations, including the economic benefits of the proposed action” when evaluating the environmental consequences of major federal action under NEPA.

CEQ added this language to clarify the statutory authority that “presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations.”⁵ While congressional intent may have been to ensure that environmental values were not overlooked, in this case it is the economic and technical considerations for which BOEM provides no detail. Regardless, the regulations explicitly require the agency to “identify environmental effects and values in adequate detail so the decision maker can appropriately consider such effects and values alongside economic and technical analyses.”⁶ The regulatory revisions make clear that an agency’s obligation under NEPA is to provide the public with comprehensive information regarding the economic and technical details of a project itself, in addition to a full analysis of its potential environmental impacts.

Another element of the NEPA regulatory update requires agencies to “review and publish environmental documents and appropriate analyses at the same time as other planning documents” whenever practicable.⁷ As described in the next section of these comments, BOEM has not published the relevant documents simultaneously with the DEIS, leading to significant confusion. Important environmental analyses including but not limited to the EFH assessment,⁸ Article VII certification, and compensatory mitigation plans (if any are established) are poorly sequenced with the NEPA process and prevent informed comment on the DEIS.

Finally—but critically important—last month the Biden Administration revoked Executive Order (EO) 13807 (“One Federal Decision”) and announced that the Director of OMB and the Chair of the Council on Environmental Quality are currently considering whether to recommend that a replacement order be issued.⁹ Despite this, EO 13807 is cited several times throughout the DEIS as controlling guidance for the document—and that guidance is so prominent as to appear in the second sentence of the DEIS’s executive

⁵ 42 U.S.C. § 4332(B).

⁶ 40 C.F.R. § 1501.2(b)(2).

⁷ *Id.*

⁸ The DEIS references availability of an EFH assessment prepared by BOEM in 2020; despite extensive searching we are unable to locate this document and the docket includes only the EFH assessment proposed by Ørsted dated 2019.

⁹ Exec. Order 14008 § 7(b) (Jan. 27, 2021).

summary. Certain provisions of EO 13807 are now codified in the revised NEPA regulations, but others with significant repercussions for the OSW regulatory process are not, including instructions for interagency coordination, roles, and responsibilities.

To address exactly this type of challenge when the public cannot know what policies and regulations will apply to pending project reviews, the Administration issued a “regulatory freeze” directing agencies to: (1) hold any pending actions scheduled to be published in the Federal Register; and (2) consider postponing rules that have been published in the Federal Register but that have not yet taken effect.¹⁰ In response, DOI immediately issued a departmental memorandum “for the purpose of implementing a targeted and time-limited elevation of relevant decisions at [DOI] for the purposes of reviewing the questions of fact, law, and policy they raise.”¹¹ Following that guidance, DOI promptly announced that it had canceled the public comment period on an already-published DEIS for an oil and gas lease sale in Cook Inlet.¹² The Department must not adopt differing interpretations of the same legal and policy actions for different activities, when nothing in these laws would apply differently to one industrial energy project over another.

In short, the public cannot be prepared to offer public comment—and BOEM cannot be prepared to finalize the SFWF or any other DEIS—when there is no certainty as to what laws and policies will apply to the agency’s review. Did the revocation of EO 13807 affect interagency Memoranda of Understanding executed under that policy that applies to finalization of the DEIS? Have BOEM and/or DOI’s NEPA handbooks been updated to reflect the changes to the NEPA implementing regulations? Now is not the time to rush to decisions that will have major identified adverse consequences on marine resources and fishing communities without proper planning and clarity.

c. Suitability of Information for Public Comment

There are an alarming number of ways in which the information provided to the public regarding the SFWF project does not provide a complete and sufficient record upon which to inform comment. Several of these are described in this section; others are raised throughout this comment submission as related to specific topics.

1. Inconsistent Federal Statements

As a threshold issue, the information in the SFWF DEIS docket directly contradicts other information in the public record. These include:

- On December 16th, BOEM published a notice in the Federal Register stating that the environmental review process for the Vineyard Wind project was terminated.¹³ BOEM’s website now states that “Vineyard Wind had paused the Department’s consideration of its proposal while it reviewed whether the use of Haliade-X turbines warranted any modifications to their COP” and it is proceeding with the development of a Final EIS.¹⁴ Putting aside questions as to the legality of this statement or the process BOEM claims to now be pursuing, these communications—and the current

¹⁰ Ronald Klain, Assistant to the President and Chief of Staff, Memorandum for the Heads of Executive Departments and Agencies regarding Regulatory Freeze Pending Review (Jan. 20, 2021).

¹¹ U.S. Dep’t of Interior, Order No. 3395 regarding Temporary Suspension of Delegated Authority (Jan. 20, 2021).

¹² <https://www.boem.gov/boem-cancels-comment-period-virtual-meetings-proposed-lease-sale-offshore>; not yet published in Federal Register.

¹³ 85 Fed. Reg. 81486 (Dec. 15, 2020).

¹⁴ BOEM, Vineyard Wind (2021) <https://www.boem.gov/vineyard-wind>.

status of another large OSW project near the one proposed by SFWF—are so unclear as to prevent the public’s ability to offer informed comment on this DEIS.

- Statements occur in several instances throughout the DEIS that reference analysis done for the Vineyard Wind project and conclude that the impacts of SFWF would necessarily be similar or less due to its smaller size and geographic proximity.¹⁵ In reality, the Vineyard Wind project cannot be referenced as having a known or even predicted set of impacts as its federal review has been terminated without publication of any final documents that incorporated public comments. To repeat, no decision on the SFWF can be made on the basis of information contained in the Vineyard Wind SEIS, which was terminated before its finalization that would have incorporated public comments.
- The “Future OSW Project Construction Schedule” in Table E-4 under the cumulative activities scenario shows construction for both Vineyard Wind and SFWF commencing in 2021. Not only is this a logistical impossibility given the timeline of review for each project, but a recent letter ruling from the U.S. Customs and Border Protection states that installation of scour protection for the Vineyard Wind project is scheduled to occur from February to December of 2023.¹⁶ There are multiple other examples of recent information from federal, state, and OSW developer sources that similarly provide contradicting project plans and timelines.
- An Announcement of Public Hearings and Request for Public Comment was issued by the U.S. Army Corps of Engineers concurrent with the DEIS. The DEIS does not reference this document nor explain the relationship between the two federal activities beyond a cursory statement that a permit or authorization is required from USACE under Section 404. The two documents also provide differing information. For example, the USACE document describes the proposed action differently, showing two “alternate” turbine locations within the proposed project array that the DEIS does not describe or evaluate in the context of the action alternatives.

2. Process Complexity and Segmentation

The division of OSW project review across jurisdictions and project phases make it extraordinarily difficult for a member of the public to understand what is decided or regulated by what entity, if at all.¹⁷ The relationship between various federal, state, and local coordinating or permitting entities and a clear description of their processes must be provided; the DEIS includes only a table (A-1) listing the required permits.¹⁸ So, too, must the SFWF docket at a minimum contain a full project record so that the public may be informed of the entirety of the project process and decisions. However, several documents with information critically important for evaluating projects plans and their environmental impacts are missing from the docket or the EIS itself or are extremely poorly described, including but not limited to:

- An executed lease for SFWF in OCS-A 0486 or OCS-A 0517 and nomination submitted by Deepwater Wind showing qualifications for lease eligibility, including a preliminary proposal for fisheries conflict mitigation (neither of these documents appear to be publicly available anywhere even outside of the docket);

¹⁵ In addition to the fact that these do not correspond with the public record, they are unfounded as approximate geographic and size are not the only factors that influence an OSW project’s environmental impacts.

¹⁶ U.S. Customs and Border Protection, Headquarters Ruling Letter H309186 (Jan. 27, 2021).

¹⁷ RODA and others have described this issue time and again through the dockets of every OSW-related public comment opportunity in the past decade; we incorporate those points by reference.

¹⁸ This table, like most in the document, is sorely out of date.

- Call for Information and responses providing information regarding fisheries activity in the lease area;¹⁹
- Environmental Assessment for lease issuance;
- Proposed and Final Sale Notices for the lease sale A-0486;
- Site characterization plans (which differ from the Site Assessment Plan included in the docket);
- NMFS Incidental Harassment Authorization or Letter of Authorization for construction activities;
- NMFS Incidental Harassment Authorization or Letter of Authorization for site characterization activities; and
- Certificate of Environmental Compatibility and Public Need, pursuant to Article VII of the New York Public Service Law.

The DEIS and these documents must be provided to the public in an accessible format. It is especially confounding that they are not included in the project record, when BOEM has consistently stated that the *only* stage in the entire planning and surveying process-- from area identification to lease issuance to survey and assessment activities-- in which impacts to fisheries merit full analysis is in the EIS associated with COP review. Their argument is that *no* binding or irreversible project decisions have been made to that point, and that fisheries interactions can be effectively de-conflicted through preparation of the Environmental Impact Statement immediately preceding final project approval. Some examples of these statements include:

- “After lease issuance but prior to COP approval, BOEM retains the authority to prevent the environmental impacts of a commercial wind power facility from occurring.”²⁰
- BOEM does not consider the impacts resulting from the development of a commercial wind power facility within the WEA, to be reasonably foreseeable at [the time of lease issuance]. Based on “the experiences of the offshore wind industry in northern Europe, the project design and the resulting environmental impacts are often geographically and design specific, and it would therefore be premature to analyze environmental impacts related to potential approval of any future COP at this time.”²¹
- In the Environmental Assessment for the lease issuance that became the SFWF project, BOEM noted that it received several comments raising concerns about NEPA segmentation and the lack of early analysis regarding fisheries interactions of wind energy projects in the MA/RI lease areas. In response it simply stated “Additional analysis under NEPA will be required before any future decisions are made regarding construction/installation, operation and maintenance, or decommissioning of any future wind energy facility to be sited in the Rhode Island and Massachusetts WEA and cannot be construed as possible project segmentation.”²² While this may be true if interpreted as any future decisions by BOEM, it certainly is not true that no project

¹⁹ 77 Fed. Reg. 5820 (Feb. 6, 2012).

²⁰ Bureau of Ocean Energy Management, *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New York: Environmental Assessment*, OCS EIS/EA BOEM 2016-042 (June 2016), p. 1-7.

²¹ Bureau of Ocean Energy Management, *Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore New York: Environmental Assessment*, OCS EIS/EA BOEM 2016-042 (June 2016), p. 4-132.

²² https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22May2013.pdf, p. 5-5.

decisions have been made, including the power purchase decisions that “locked in” the project size, configuration, and technology despite no DEIS in existence prior to this agreement.

Despite these clear statements that project-controlling design decisions cannot be made before project finalization, BOEM, States, and developers have already made project-controlling decisions regarding design parameters that have now severely restricted the range of alternatives in the DEIS. This prevents the public from accessing the public participation process in a meaningful way.

One suggested approach to address the NEPA segmentation for OSW, which should supplement but not replace national strategic planning, would be the development of suitable Programmatic Environmental Impact Statements by region with tiered analyses for individual projects or contiguous lease areas. Although BOEM conducted a Programmatic EIS in 2007 that related, very generally, to the development of offshore alternative energy in the Atlantic, that document was glaringly inadequate and erroneous in its treatment of fisheries impacts. Additionally, it provided no details that would inform analysis of the impacts of offshore wind energy development in the New England region. It also predated the current scope of OSW under consideration.

3. Public Engagement and Access to Information

OSW developers have created significant public confusion with incessant, unverified claims about the status of their projects and their industry, both generally and with regard to fisheries impacts and interactions. Rather than being presented in a clear and objective manner, important decisions and basic project information are buried in an avalanche of press releases and public meetings--and much of the information released is blatantly contradictory. These declarations become extremely difficult to follow; most regard such minutiae such as which consulting firm was hired to design which project component, but even the far more important information regarding plans for which ports or technology to use, and whether domestic workforce plans are in place, are impossible to follow due to the frequency with which plans change.

The resources available to developers to flood the public with such information far outweigh those of fishermen to track and understand whether promises have been made and kept, and *what the overall process is*, much less if it is being adequately followed. Unfortunately, more recently, BOEM’s own discordant communications regarding the Vineyard Wind project have added to this atmosphere of disorientation.

A concise characterization of this situation would be “confusion by diffusion.” When too much information exists, but it is of poor quality, the public interest is not met and coexistence cannot be achieved. RODA does not dispute that there have been a large *quantity* of “engagement” opportunities provided to fishermen with regard to the SFWF or other OSW projects (although this was not--and is still not--the case in early project planning for the existing projects nor in areas of the U.S. that are conducting that planning now). Rather, we submit that the *quality* of such opportunities, and of the information transmitted to the public, has been so inferior that in some cases fishermen consider it more harmful to have been involved than to have had no opportunities at all.

While it is not BOEM’s responsibility to control private sector communications—even public communications by private entities²³—it *is* its job to ensure that the public is well informed and has adequate public comment opportunities under the law.²⁴ In exercising its duty to ensure meaningful public input, “the

²³ As RODA has stated in the past, we stand eager and willing to work directly with BOEM to improve industry-to-industry communications, which would benefit from expanded federal involvement.

²⁴ See 5 U.S.C. § 553(c).

quantitative level of participation should not be given greater priority than the quality and balance of participation.”²⁵

NEPA provides an agency with wide-ranging regulatory and interpretive discretion so long as “its promulgation process as a whole and in each of its major aspects provides a degree of public awareness, understanding, and participation commensurate with the complexity and intrusiveness of the resulting regulations.”²⁶ These comments detail the ways in which meaningful participation has never been available for enormously complex OSW projects, as the NEPA process is largely outside of the process in which key planning decisions are made.

The DEIS itself also fails to support adequate public participation as a result of its form and the information contained therein. Critical information that *is* still subject to federal discretion, including but not limited to the definition of the habitat alternative, alternatives for mitigation including compensatory relief, and the results of the ongoing cod study, have been deferred to inclusion in a future FEIS.

The complexity of OSW projects means that an enormous number of decisions shape their ultimate outcome. Just a few of many examples of information included in the proposed action for which the DEIS does not consider alternatives (presumably because the developer has already determined these elements of project design) include:

- Turbine orientation;²⁷
- The cable layout route in anything but the broadest geographic terms; and
- Cable burial depth.

Many more of these examples are included elsewhere throughout these comments, as well as information that does not appear in the DEIS and appears entirely unregulated, despite having significant effects on the type and degree of environmental impacts. The NEPA review must include at least the most important of these decisions, but BOEM’s current approach to it does not.

Even outside of the NEPA process and information conveyed through the media, it is nearly impossible for the public, much less for fishermen, to access basic information about the status of OSW planning and the large number of projects through trusted channels. Fishermen should be viewed more as co-planners or even directly impacted parties than the general public, and thus deserve especially careful attention. Multiple lease reassignments, project starts and stops, changing project names, and quickly evolving relationships between various states and individual developers or projects have also contributed to the public’s difficulty in following the OSW leasing process from start to finish.

The DEIS’s summary of current status of Atlantic OSW projects in Table E-3 provides no relief; it was sorely outdated at the time of DEIS publication. For example, it does not reflect that CVOW’s project in OCS-A 0497 has been built, last year’s procurements in NY and NJ, or the submission of COPs by Avangrid and Dominion. The caption of the table notes that the table will be updated, but the public needs current information in order to understand the state of Atlantic OSW development if it is to draft informed comments on the DEIS.

²⁵ Cary Coglianese et al., *Transparency and Public Participation in the Rulemaking Process: A Nonpartisan Presidential Transition Task Force Report* (July 2008) p. 4.

²⁶ *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1028 (DC Cir. 1978).

²⁷ To be clear, the E-W orientation is preferred by fishermen operating in and near the lease area but this decision was made outside the NEPA process.

The SFWF has been reassigned multiple times but it is difficult to track this, especially since the official name on BOEM's website does not include the colloquial name of "South Fork Wind Farm." Even the Notice of Availability regarding this DEIS references SFWF as a "Proposed Wind Energy Facility Offshore Rhode Island" without reference to the State that the DEIS claims to shape the project's purpose and need. At a minimum, a complete audit of the BOEM website for each lease area, complete with all records pertaining to each lease, would help the public more easily find all relevant documents. A more explicit suggestion for improving public information is included in the section of these comments regarding the Fisheries Communication Plan below.

d. SFWF Scoping under NEPA

Scoping for this DEIS occurred over a short 30-day period in 2018. At that time, RODA submitted a request for extension of the comment period²⁸ due to: (1) the significance of the project; (2) the public benefit of conducting NEPA review by "eliciting the best possible data and public input before key decisions are made that could unnecessarily impact the human or natural environment, and which may become costly or impossible to mitigate"; (3) the length of the SFWF COP (608 pages and nearly 40 appendices); and (4) overwhelming OSW-related time demands on the very regional fishery participants who would be impacted by the SFWF project during the 30 day scoping period including:

- Workshops regarding cable burial risk conducted by Ørsted;
- Workshops regarding fisheries monitoring and science for the Vineyard Wind lease site;
- Workshops regarding delineation of transit lanes for all of the Northeast lease sites;
- BOEM's announcement and request for input regarding new proposed lease sites in the New York Bight;
- NYSERDA's "State of the Science" workshop specific to offshore wind;
- New York State's Fisheries Technical Working Group meeting;
- The Northeast Regional Ocean Council's meeting to determine regional data and ocean planning priorities;
- A meeting of the Rhode Island Fisheries Advisory Board specific to the Vineyard Wind lease; and
- Outreach from Equinor regarding design for its lease site.

It is unfortunate that BOEM denied the extension request and did not afford the time required to gather thoughtful input from fishing communities, particularly when it has "paused" its review of this and other projects countless times at the request of developers.²⁹ Nevertheless, some limited scoping recommendations were submitted by commercial fishermen and their representatives, and other requirements for a DEIS scope are imposed by NEPA and other laws.

NEPA requires consideration of "Alternatives, which include the no action alternative; other reasonable courses of action; and mitigation measures (not in the proposed action)" within the scope of a DEIS.³⁰ It must also indicate whether other NEPA documents are being or will be prepared that are related to but

²⁸ See <https://rodafisheries.org/wp-content/uploads/2021/02/181115-DWW-request-for-extension.pdf>.

²⁹ BOEM's website for SFWF notes a "project pause was initially requested by the project sponsor to provide additional information in their Construction and Operations Plan (COP). The project pause continued while BOEM conducted an analysis to address public comments regarding cumulative impacts of future offshore wind development" without providing specific detail. Note that the referenced analysis of public comments, if it exists, has not been made available to the public.

³⁰ 40 C.F.R. § 1501.9(e)(2).

separate from the scope of the action under consideration.³¹ The DEIS contains almost a complete lack of such alternatives that constitute mitigation measures for impacts to commercial fishing and fish stocks (the notable exception being the transit lane alternative). Perplexingly, fisheries experts provided comments during previous phases of BOEM's outreach on this project--including the Call for Information and scoping activities--suggesting mitigation measures for consideration. The vast majority of those substantive comments and mitigation recommendations do not appear in the DEIS.³² Some of these include:

- New England Fishery Management Council: "Specifically, we ask that BOEM consider a robust range of alternatives related to turbine spacing and arrangement. Alternative cable routes also should be formally considered."
- NMFS GARFO: "[A]lternative locations within the lease area should be considered, particularly if such locations would minimize impacts to sensitive habitats and other marine resources. An evaluation that considers the most appropriate location for project siting within the lease area should be included. If alternative locations within the larger lease are not considered, it will be necessary to provide a detailed explanation and justification as to why..."
- NMFS GARFO: "In addition to the proposed spacing alternatives outlined in the COP, the potential need for greater than one-mile spacing should be considered, particularly if such an alternative could minimize environmental impacts in the area."
- NMFS GARFO: "Modifications to cable installation and layout should also be evaluated as part of any turbine spacing alternative."
- NMFS GARFO: "The cable corridor alternative should be evaluated for ... the extent of the route that allows for full cable burial to minimize permanent habitat impacts and potential interactions with fishing gear."
- Amagansett F.I.S.H.: "The BOEM should not move forward with any OSW project until such time that detailed site specific, project specific and species specific electromagnetic frequency studies have been accomplished as recommended by [prior BOEM] reports."
- East Hampton Fisheries Committee: "Compensate us for loss of income during construction and damage to fishing gear caused by construction and operation."
- East Hampton Fisheries Committee: "Allow a fisherman to have a seat on the committee for the purposes of being privy to all plans for expansion and having a voice to express the rights and needs of the fisheries."
- Massachusetts Lobstermen's Association: "We strongly ask that more research be done on the impacts of the OSW turbines and the interaction with radar on the vessels."
- Long Island Commercial Fishing Association: "BOEM should analyze a percentage range of lost fishing grounds from requiring additional cement mats and other armoring options being placed on the ocean floor where the SFEC cable cannot be buried, and the subsequent economic losses for New York fishermen of varied gear types, with values that include lost terrain of up to 0-50% of the entirety of the SFEC cable route, due to the unexpected increases in cable armoring via concrete matting, concrete bags or rock by DWW throughout the SFEC corridor."

Other comments raised in prior communications regarding the SFWF project and BOEM's approach to NEPA more generally are also absent from this DEIS. These include previous comments from RODA, other fishing interests, state and federal agencies on processes associated with the MA/RI WEA area identification and lease issuances, the Vineyard Wind DEIS and SEIS, BOEM's 2015 Request for Feedback

³¹ *Id.* § 1501.9(f)(3).

³² One possible explanation for this may be found in the Jan. 2021 date of the Scoping Summary Report prepared for BOEM by Ørsted's consultant SWCA. It would be difficult to incorporate the results of scoping if they were not completed until at most 3 days prior to the DEIS's publication on January 4th.

on the State of the Renewable Energy Industry,³³ and others. As these are formal comments to BOEM regarding the proposed action or closely related activities, each are incorporated by reference. These scoping suggestions must be analyzed, or an explanation must be included as to why they have been rejected by BOEM.

e. Purpose and Need

The DEIS describes different purposes for the proposed action, grouped by the purposes for the project applicant, BOEM, and cooperating agencies. For the project applicant, these include to develop a commercial-scale OSW facility, in the area of the SFWF lease, with turbines, a substation, and one transmission cable landing in Suffolk County, New York, to contribute to NY's goal of 9,000 MW of offshore wind energy generation by 2030 and fulfill its contractual obligations pursuant to a power purchase agreement with the Long Island Power Authority (LIPA) executed in 2017. BOEM's purpose is to respond to that application by determining whether to approve the Construction and Operation Plan (COP) in furtherance of OCSLA's mandate to make outer continental shelf (OCS) energy resources available for expeditious and orderly development, subject to environmental safeguards including consideration of natural resources and existing ocean uses. For cooperating agencies, the purpose is to consider impacts to relevant resources and, if appropriate, issue permits or authorizations. These described purposes are fundamentally flawed as a matter of law and fact.

First, NEPA must be approached to fulfill the agency's purpose and need, not that of a project applicant (although the applicant's interests and objectives may be taken into account).³⁴ The purpose of NEPA is "to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation."³⁵ Typically a purpose and need statement must incorporate this overarching purpose in conjunction with action-specific legislation, which in this case is OCSLA. Such an approach is evidenced by BOEM's 5-year plan for oil and gas, which has the stated purpose to implement requirements of OCSLA Sec. 18(a)(3) to "balance the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impacts to the coastal zone." Following from this correctly framed purpose and need, the 5-year plan then provides a thorough analysis of relevant energy demands and future needs forecasts.³⁶

An appropriate purpose and need statement for this action would lead BOEM to prioritize OCSLA and NEPA's focus on environmental safeguards and eliminating damage to the environment, rather than on a private agreement executed outside of the NEPA process which would predispose the outcome of environmental review. If anything, this environmental analysis should have informed the power purchase contract, not the inverse.³⁷ Regardless, an agency cannot circumvent its NEPA obligations "by adopting private interests to draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private objectives" nor can it "craft a purpose and need statement so narrowly drawn as to foreordain approval of" a project proposed by a private party.³⁸ Moreover, the purpose and need proposed by the private party in this case is poorly grounded in history, as New York's 9000 MW goal for OSW was

³³ 80 Fed. Reg. 58786 (Sept. 30, 2015).

³⁴ See 40 C.F.R. § 1501.7(h).

³⁵ 42 U.S.C. § 4321.

³⁶ BOEM, Outer Continental Shelf Oil and Gas Leasing Program: 2017-2022 Final PEIS (Nov. 2016) p. 1-2.

³⁷ This point highlights the previously-referenced need for a Programmatic EIS for the U.S. wind leasing program.

³⁸ Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt., 606 F.3d 1058, 1072 (9th Cir. 2010).

adopted after the execution of SFWF’s power purchase agreement, and long after the leasing and planning process for this project began.

In several instances throughout the DEIS, the overly narrow purpose and need statement do in fact improperly limit BOEM’s analysis and consideration of an appropriate range of alternatives.³⁹ BOEM cannot limit its range of alternatives or analysis for this project based on contracts or decisions that were made prior to NEPA review. This is both an established principle of NEPA judicial history and a fact that BOEM has previously acknowledged.⁴⁰

It is also important to note that the purpose and need for action under this section of OCSLA--as defined and as it *should* be defined--differs vastly from public messaging by OSW developers, states, and even the Administration. The two justifications cited for such projects are mitigation of climate change and job creation. If these are priorities of the permitting entities, they should be stated as such and thoroughly evaluated in this and other DEIS documents. If not, they should not be cited as the basis for these projects.

f. Cumulative Impacts

The DEIS conflates cumulative impacts with the No Action alternative, fails to provide a clear explanation of the cumulative impacts scenario, and utilizes different descriptions of cumulative impacts throughout the document. Section 1.7 of the DEIS briefly describes the methodology for assessing cumulative impacts, which are defined as “the incremental effects of the Proposed Action on the environment when added to other past, present, and reasonably foreseeable future actions...” Key to this definition are what actions are considered as reasonably foreseeable. Therefore, BOEM needs to explicitly spell these out for the purposes of the EIS and the ability for the public to accurately interpret the environmental consequences of the Proposed Action.

Considering the problems with the No Action alternative (discussed below), the Cumulative Impacts assessments are very inaccurately portrayed. Whereas previously BOEM maintained that cumulative impacts were negligible because one project is, essentially, not that large or significant, in short, BOEM’s new (highly flawed and misleading) argument is that the No Action Alternative would include “the addition of up to 2,050 new WTG and OSS foundations in the geographic analysis area” (cited throughout in the No Action Alternatives sections including with this language on p. 3-13), so one project is *still* not significant in light of this larger picture. But nowhere does it fully analyze a possible 2,050 WTG compared to the present day status quo.

First, the installation of such a large number of turbines is not a guarantee, and the No Action Alternative treats it as such in numerous places throughout the DEIS. While we understand that states are working to meet clean energy goals by 2030 and beyond, an assumption that upward of 2,050 offshore wind turbines will be installed in the Northwestern Atlantic ocean within a very short time frame, compared to the 7 that

³⁹ See, e.g., BOEM’s statement that transit lanes of greater than 4 nm “would be equivalent to the No Action alternative because additional WTGs would be removed, and remaining WTGs would be insufficient to meet DWSF’s power purchase agreement.” (SFWF DEIS, p. 2-15); see also BOEM’s dismissal of a proposed alternative from further analysis that would use “the LIPA 138-kV land-based transmission cable project or the East End –Battery large-scale facility to meet energy demand” based on the rationale that it is not responsive to the purpose and need. (SFWF DEIS, p. 2-13).

⁴⁰ A developer’s investment in a lease is “made with full awareness that its proposals for a wind energy facility may be rejected and that it may never construct or operate such a facility.” (*Fisheries Survival Fund v. Jewell*, 2018 WL 4705795 (D.D.C. Sept. 30, 2018)).

currently exist, is speculative at best. It is highly misleading to characterize impacts from the proposed South Fork Wind Farm against these hypothetical estimates of WTGs.

The Scope for Future Possible Development of Offshore Wind figure on page E-5 shows that 5.4 GW of COPs have been submitted or approved. BOEM should make this information available at the beginning of the document where the No Action alternative is first presented, and it should distinguish between what projects have been approved versus what has only been submitted, but not yet approved. BOEM needs to explain how assumptions on what projects are “reasonably foreseeable” were made.

The logic used for the Cumulative Impacts assessment seems to be that, ‘if it’s presupposed that there will likely be 2,050 turbines in the future, what’s 15 more turbines’? This creates a loophole in the assessment of cumulative impacts where the potentially largest project to date in the U.S. Atlantic could get a free pass because it looks small next to the specter of the thousands of turbines that some would like to build. This is an unacceptable approach for conducting an EIS.

Here are a few examples that further illustrate the problem:

- The DEIS states that Proposed Action structures represent no more than a 1% increase over total estimated WTG and OSS foundations across the geographic analysis area under the No Action alternative. “BOEM estimates a cumulative total of 975 offshore WTGs and OSS foundations for the Proposed Action plus all other future offshore wind projects in the RI/MA WEA. Therefore, the cumulative impacts associated with the Proposed Action when combined with past, present, and reasonably foreseeable activities would consist predominantly of impacts described under the No Action alternative, which would represent a long-term, minor to moderate impact on military and national security uses.”⁴¹
- “The Proposed Action would result in negligible incremental impacts to benthic habitats, finfish, invertebrates, and EFH through the installation of 16 lighted structures (15 WTGs and one OSS). This represents less than a 1% increase to conditions under the No Action alternative. BOEM estimates a cumulative total of 2,066 offshore WTGs and OSS foundations for the Proposed Action plus all other future offshore wind projects in the geographic analysis area. ... Therefore, the cumulative impacts associated with the Proposed Action when combined with past, present, and reasonably foreseeable activities would be similar to those impacts described under the No Action alternative and would be negligible, mostly attributable to existing, ongoing activities.”⁴²

These inconsistent and misleading claims of the cumulative impacts from the No Action Alternative are completely uninformed. This analysis should not shoehorn in cumulative impacts where it is convenient for a project the size of the SFWF but fail to analyze any real cumulative impacts of large scale buildout of the entire RI/MA leases where inconvenient.

BOEM must also reconcile the differences in cumulative impacts rankings between the SFWF DEIS and Vineyard Wind I (VW) SEIS. The DEIS state “[c]umulative impacts are the incremental effects of the Proposed Action on the environment when added to other past, present, and reasonably foreseeable future actions, regardless of which agency or person undertakes the actions.” Considering the DEIS analyzes the installation of no more than 15 turbines out of an expected approximately 2,050 turbines along the east coast, and the cumulative activities scenario for two projects analyzed mere months apart in the absence of additional leasing should be roughly similar, it defies all logic that the cumulative impacts across the valued

⁴¹ SFWF DEIS, p. 3-166.

⁴² *Id.* p. 3-31.

ecosystem components would be given a lower magnitude of impacts in the SFWF DEIS compared to the VW SEIS analysis.

In summary, the Draft EIS does not provide a reasonable assessment of cumulative impacts, and the information presented is hard to follow. BOEM needs to clarify its methodology and on the actual predicted impacts, while making it clear that there are significant unknown impacts that still need to be investigated.

III. DEIS ALTERNATIVES

This section addresses each of the specific alternatives within the DEIS.

a. No Action Alternative

The No Action alternative, as presented in this DEIS is characterized by: (1) a lack of consistency and clarity; and (2) sweeping, unjustified assumptions made regarding “reasonably foreseeable” future OSW development. Thus, all subsequent comparisons of impacts across alternatives are skewed in a way that is not made obvious, nor do they make logical sense. Given that a major purpose of this document is to provide a baseline for understanding potential consequences of the proposed offshore wind project, it is imperative that BOEM clarify the No Action Alternative for simple public interpretation.

In the introduction to the DEIS, BOEM incorrectly states that Chapter 2 provides detailed descriptions of the analyzed alternatives. The No Action Alternative is not clearly defined, the description is vague and does not state explicitly what is assumed to be “reasonably foreseeable.” It states that the COP for SFWF would not be approved, however:

All other existing or other reasonably foreseeable future impact producing activities would persist in the Lease Area. Table 2.3.1-1 includes an impact assessment of the No Action alternative for each resource, including an assessment for cumulative effects. The No Action alternative cumulative effects assessment provides an assessment for impacts with and without approval of additional wind farms in BOEM lease areas. Through these assessments, the No Action alternative provides a baseline against which all action alternatives are evaluated.

This alternative poses the following problems:

- Before readers are told that 2,050 WTGs and 5,779 miles of cable are included in the No Action future, they are presented with the “Comparison of Impacts by Alternative,” which lists impacts to the numerous resources;
- The hypothetical future of “with and without” approval of additional OSW projects should, at a minimum, be treated as 2 separate alternatives (and common sense would suggest that there may be options in between). There would clearly be a massive difference in environmental impacts between 2,050 new WTGs and none;
- The scenario referred to as “baseline” is illusory, as there are currently only two WTGs in federal waters off the U.S. northeast coast--a far cry from 2,050. Further, it is not clear whether the “lease areas” in multiple references throughout the DEIS refer to RI/MA, southern New England, or to the entire Atlantic;
- It is misleading, at best, for BOEM to omit critical information about the details of what it assumes without justification is considered “reasonably foreseeable wind turbine development” in the description of the No Action alternative;
- This description of reasonably foreseeable future activities appears to align with the description provided in the Vineyard Wind SEIS, which BOEM declared terminated before incorporating

public comment. Moreover, the SEIS contained detailed explanations of the criteria used to determine what qualified as reasonably foreseeable activities and what those actions were. In contrast, this DEIS provides only unfounded and inconsistent claims; and

- The totality of these errors results in a complete masking of the environmental impacts of the proposed SFWF *and* those of 2,050 WTGs. This analysis has never been completed and the public cannot be adequately informed without it.

The DEIS describes how the “No Action Alternative” could result in:

- Accidental releases and discharges of both fuel/fluids/hazmats and trash;
- Electromagnetic fields;
- New cable emplacement and maintenance;
- Noise
- And more...

It is misleading to call this alternative “No Action” and yet be referring to unprecedented and entirely new development and use of the Outer Continental Shelf, for which BOEM has not yet finalized a cumulative review nor environmental analysis.

The conclusions of the No Action alternative are not useful in any practical sense. BOEM wraps its analysis by determining that it anticipates the range of impacts for reasonably foreseeable OSW activities to be “negligible to moderate” and that the range of such impacts from reasonably foreseeable activities *other than* OSW would also be “negligible to moderate.” The range between negligible to moderate accounts for 3 out of 4 possible rankings, and BOEM claims that impacts are the same whether or not offshore wind activities occur. The public cannot draw any meaningful conclusions from this paragraph.

In summary, clarification is needed as to what the assumptions are for the No Action alternative and how these assumptions were made. If BOEM is presenting as a fact that 2,000 or more WTGs will be installed in the reasonably foreseeable future, it must clearly state that and explain why- not only buried in an appendix, but within the description of the action. Both this “full buildout” scenario and a “no buildout” scenario must be evaluated using all the criteria provided in these comments in order to meet NEPA’s requirements of public informedness.

b. Proposed Action

The proposed action consists of development of part of the Deepwater Wind South Fork Lease Area (OCS-A 0517) with up to 15 wind turbines, a maximum of 21.4 miles of 6- to 12-inch-diameter inter-array cables, and an offshore substation, in addition to installment of an export cable and interconnection facility in East Hampton, NY.

The size of this project is more appropriate for its consideration as the first OSW facility in U.S. federal waters than multiple other projects under consideration that are substantially larger. However, it is difficult to evaluate even the proposed action in the DEIS as there are numerous project details that are not described. These are addressed in later sections of this comment letter, and include:

- Of the 18 turbine locations provided on the map, which locations would be used and where a substation would be located;

- Specific location (“micrositing”) of the cable route and turbine locations;⁴³
- Possibilities for coordinated transmission; and
- Specific descriptions and quantities of materials used, where and how they would be sourced, and how their sourcing and transport would affect the environment.

The description of the proposed action also contains at least three errors:

- It states that DWSF has “committed” to a grid layout of approximately 1.0 nm. This should be changed to “proposed” or the DEIS should clearly describe the definition of commitment BOEM has applied.
- It states that the proposed layout “aligns with other proposed adjacent offshore wind projects in the Rhode Island/Massachusetts Wind Energy Areas.” It is unclear what definition of “proposed” BOEM is adopting as to the best of our knowledge there are no ongoing NEPA consultations evaluating projects with this layout, and none have been approved. This language should read “may” align.
- The proposed action includes only monopile foundations and Table 2.1.5-1 describes all other existing turbine foundation types as technically infeasible. However, Appendix G includes the use of monopile turbines as a proposed mitigation measure for impacts to fishery resources. The DEIS must clarify whether alternative turbine foundations are available and, if not, remove the use of monopiles as a mitigation measure.

The proposed action must be clarified and greater detail provided.

c. Transit Lane Alternative

RODA and our members remain appreciative of BOEM’s inclusion of an alternative in the DEIS that would provide safe transit lanes for vessels, and urge it to require the preservation of historic fishing transit routes as requested by fishermen since the earliest days of OSW planning. We urge you to adopt this alternative if the project is approved. For the commercial gear types found in the SFWF project area, 1x1 nautical mile spacing between turbines is too narrowly spaced for most fishing operations. Thus, if spacing remains prohibitive, resulting in full (or even majority) functional fishing closures, access to viable and safe transit options becomes the single most important mitigating factor to the project design. Failure to include measures that would preserve fishermen’s ability to safely transit the Southern New England lease areas would unreasonably interfere with fishing operations. This directly conflicts with the Department of the Interior’s statutory mandate to prevent offshore wind energy’s interference with fishing as determined by the internal legal memo dated December 14th, 2020.

Regrettably, and undermining the public’s understanding of the importance of this alternative, the DEIS’ analysis with respect to the transit lane alternative is grossly deficient in several regards. As with much of the rest of the document, it is replete with missing information, unfounded conclusions, and absent or incorrectly referenced citations.

To repeat, the need for safe transit lanes of 4 nm has been raised time and again by fishermen and other fisheries experts. The full history of these requests is detailed in RODA’s comments to BOEM on the Vineyard Wind SEIS. It was also clearly raised in the scoping process for this SFWF DEIS.⁴⁴

⁴³ These details are primary influencers of the degree of fisheries interactions, such as burial depth, cable alignment, and quantity of material introduced to the environment.

⁴⁴ See, e.g., NEFMC’s comments in response to the Notice of Intent: “A clear assessment of the costs and benefits associated with various layouts is critically important, as the set-up of the array is fundamental to the ability of fishing

Despite these repeated requests for analysis, the DEIS contains absolutely no mention of the impacts of this alternative to the following crucial topics: fishing economics, product quality, markets, fisheries management, and living marine resources that may benefit from migration corridors. It also contains no reference at all to the history of collaboration and negotiation that led to the transit lane proposal. Indeed--in contrast to the other alternatives and standard NEPA format for presentation of alternatives--it provides no rationale for its conclusion in the DEIS except that it “could facilitate transit of vessels through the Lease Area from southern New England and eastern Long Island ports to fishing areas in the region.”⁴⁵ The DEIS does contain a perfunctory safety analysis but it is flagrantly inadequate, as described below. For these reasons, we urge BOEM to conduct and release for public comment a comprehensive analysis of the transit lane proposal across all project areas.

1. Legal Requirement

The December 14, 2020 legal memorandum issued by DOI clarifies that OCSLA should be applied in a manner consistent with congressional intent, which means that OSW development cannot interfere with reasonable uses of the OCS including fishing vessel transit. It provides clear criteria for what would constitute such interference:

1. The perspective of the fishing user: “This means, for example, that for commercial fishermen whose transit would suffer minimal interference (e.g., adding only a couple minutes to arrive at their fishing location), such interference by itself would likely not constitute unreasonable interference. If the proposed wind energy activity, however, would bar access to, or greatly impact fishing activity, then this degree of interference would rise to the level of unreasonableness.”
2. Cumulative interference: “While one minimal interference by itself might not be unreasonable, the cumulative effect of multiple interferences from a proposed activity, along with the interference from other pre-existing wind energy activities, might lead to a determination that the cumulative impact is unreasonable as a whole, given the limitations on the Secretary. Consequently, the Department should evaluate whether a series of minor interferences might collectively become unreasonable.”

2. Cumulative Effects Analysis and Impacts Characterization

The transit lane alternative is analyzed inconsistently throughout the document in two manners. First, the cumulative effects analyses appear to presume (although it is not clear in every document section) that even if a 4 nm transit lane were included in the SFWF project approval, future projects would not contain any lanes. This is inconsistent with the proposal RODA submitted and with the clearly communicated consensus of the fishing industry. Second, sweeping statements regarding characterization of the alternative’s impacts, and its comparison to other alternatives, are made without adequate support or any justification. These statements, and language within the DEIS, are so grievous as to fatally bias the information presented to the public.

The DEIS also masks the obvious safety benefits of minimizing hazards in historic fishing vessel transit locations. There are several examples:

activities to continue within the wind farm. The COP appears to assume that fishing operations will be minimally affected by either a 0.8 nm or 1.0 nm turbine spacing, and our interaction with the fishing industry suggests that this view is not shared by many fishermen. The impacts analysis should consider the effects on fisheries if the suggested layouts do have negative impacts on vessel access.

⁴⁵ SFWF DEIS, p. 2-8.

- The DEIS states that transit lanes of 2-3 nm would have the same impacts as the Proposed Action “because the lane would not overlap any proposed WTGs or the OSS.” This would clearly not be the case in the cumulative effects analysis if it properly considered such lanes in the entire MA/RI lease area.
- The map included in the description of this alternative is misleading as it does not include the size and location of the 1400 square miles of contiguous lease areas.
- The DEIS characterizes overall cumulative adverse impacts as “moderate” and states that, when compared to the Proposed Action, cumulative navigation impacts could slightly increase or decrease depending on final design. This simply does not make sense and provides no justification for the conclusion.
- The DEIS states “[w]hen compared to the Proposed Action, the transit corridor could facilitate or hinder vessel transit, depending on the type of vessel. The transit corridor could increase the potential for allision, collision, and other navigation conflicts as compared to the Proposed Action.” Again, the proposed action consists of up to 15 turbines in 3 rows. The transit lane alternative consists of up to 12 turbines in 2 rows. If there is an explanation for how the latter alternative could increase the potential for collisions in comparison to the former, it must be provided.
- Elsewhere in the document, in the section on Environmental Justice, BOEM reaches a different conclusion: “When compared to the Proposed Action, air, water quality, and commercial fishing impacts could slightly decrease depending on final design” based on the transit lane alone. This needs to be explained.

3. Navigation and Safety Analysis

The DEIS fails to sufficiently analyze navigational safety which continues to be a deep concern held by the fishing industry. RODA has submitted numerous comments to BOEM and USCG outlining safety concerns on the proposed uniform 1x1 nm spacing design supported by OSW developers. These are summarized in brief here and more detailed justification can be found in the submitted letters, which are incorporated by reference.⁴⁶ RODA’s justification for transit lanes of 4-mile width is contained in this series of communications. In short, BOEM must properly analyze impacts to safe navigation and vessel traffic prior to decisions made on the impacts from this project. This should be conducted for all alternatives described by the DEIS.

The statement in the DEIS that the 1x1 nautical mile spacing was recommended by USCG⁴⁷ is inaccurate, as it was proposed by the developers, not USCG. Analysis in the Massachusetts Rhode Island Port Access Route Study by USCG outlines traffic and navigation risks associated with the proposed spacing, but does not provide recommendations on project design. We maintain that this proposed spacing will make fishing operations and transiting much less safe and possibly prohibitive. As you know, our organization filed an appeal of the USCG’s Massachusetts Rhode Island Port Access Route Study (MARIPARS) alleging deficiencies under the Information Quality Act. USCG denied that appeal stating, in part:

The MARIPARS is only “influential” to the extent that it would form the basis of a subsequent Coast Guard policy decision to commence a rulemaking for the purpose of establishing a new routing measure or amending an existing one... Your letter suggests the MARIPARS is tantamount to a final decision about the turbine layout within the MA/RI

⁴⁶MARIPARS: https://rodafisheries.org/wp-content/uploads/2020/04/The_Responsible_Offshore_Development_Alliance.pdf; IQA: Request for Correction to the USCG MARIPARS <https://rodafisheries.org/wp-content/uploads/2020/07/200629-MARIPARS-correction-RODA.pdf>; SEIS: https://rodafisheries.org/wp-content/uploads/2020/08/200727_RODA_VW_SEIS.pdf.

⁴⁷ SFWF DEIS, p. 2-6.

WEA, however that decision will ultimately be made by BOEM, which in addition to the Coast Guard's navigational safety opinion, will consider many other inputs... the MARIPARS is not influential because the decisions on wind turbine siting could be made in its absence.

We are now alarmed to see that the DEIS does not provide any such “other inputs” at all, as it contains next to no citations for how the future presence of structures will impact vessel traffic and navigational safety, including radar interference or nearly all of the other issues RODA and others have previously raised.⁴⁸ In fact, the meager two citations used in the DEIS’s navigation and safety analysis are to non-existent documents: “BEOM 2020” (assuming this is a spelling error, there is also no cited literature for “BOEM 2020” in the Navigation and Vessel Traffic or Other Uses bibliographies); and “Brostrom et al. 2019,” a statement made in a press release by the CEO of Ørsted which is hardly a scientific justification.⁴⁹ The DEIS simply does not provide enough information or rationale for the proposed action to provide safe navigation for mariners.

BOEM must not rely solely on the MARIPARS to draw the conclusion that transit lanes are unnecessary in the MA/RI lease block. The DEIS does not correct the deficiencies in the MARIPARS, therefore there is not an adequate basis to support the developers’ attestations that a 1x1 nautical mile spacing for the WEAs would accommodate safe transit. Instead, BOEM must use the best available information to prevent unreasonable interference to fishing operations and transit, which has been provided by fishermen and fishing groups, i.e., experts in the field, in numerous comment letters and during public workshops. Based on the outcomes of the workshops and engagement with the fishing industry, RODA reiterates our unanswered request provided in response to the Vineyard Wind SEIS to address the concerns presented in regard to the original MARIPARS study, which wholly support adoption of this transit lane alternative.

Of particular concern is the failure of the DEIS to address the impacts to search and rescue (SAR) and the following statement:

*Nonetheless, the presence and layout of large numbers of WTGs could make it more difficult for SAR aircraft to perform operations, leading to less effective search patterns or earlier abandonment of searches. **This could result in otherwise avoidable loss of life due to maritime incidents.***⁵⁰

This is a logical conclusion despite having no attribution, but the DEIS does not attempt to address this concern nor outline proposed mitigation measures to address the “avoidable loss of life.” If loss of life is predicted, and can be avoided, BOEM should require any mitigation measures necessary to do so as permit conditions.

The DEIS analysis of impacts to navigation and vessel traffic of the transit lane alternative is not even included in the main document, but included only in an appendix on pages H-96 & 97. It consists of 4 short

⁴⁸ Elsewhere in the DEIS, BOEM states: “Some fishing vessels operating in or near offshore wind facilities may experience radar clutter and shadowing. Most instances of interference can be mitigated through the proper use of radar gain controls” (SFWF DEIS, p. 3-91). It is unclear whether this implies that fishermen currently use gain controls improperly or what “proper” use would entail. It is also unclear why this acknowledged radar interference is not evaluated as a safety or navigation impact in the relevant analytical sections.

⁴⁹ SFWF DEIS p. 3-160.

⁵⁰ SFWF DEIS, p. 3-161 (emphasis added).

paragraphs of analysis, with 2 more for conclusions. We urge BOEM and the public to review this section objectively and consider whether it adequately addresses this alternative and this topic of fundamental importance to the fishing fleet. Notably, BOEM concludes (without acknowledging any of the factors that provide rationale for the alternative) that the transit alternative would have similar impacts to the proposed alternative, both at a project-specific and cumulative impacts level. The language chosen by BOEM curiously slices its analysis two ways; at the project level, it is not rational to conclude that a project with 1/3 fewer turbines would have an equivalent safety impact. At the cumulative level, it cannot assume that removing ~5 out of the ~1000 turbines in the larger lease area amounts to a proverbial drop in the bucket. These faulty conclusions underscore the structural flaws and the lack of relevant analysis in the DEIS.

4. Final Note on Automatic Identification Systems (AIS)

Perhaps it is optimistic to reference this as a “final” statement on vessel Automatic Identification System (AIS), but hope springs eternal. Repeatedly, for years, multiple fisheries groups including RODA have informed government agencies and OSW developers that Automatic Identification System (AIS) technology should not be used as a primary data source for evaluating vessel behavior. These comments have been echoed by the National Marine Fisheries Service⁵¹ and even acknowledged in formal comments by BOEM.⁵² Even for vessels that are using AIS, the USCG acknowledged that in June of 2018 over 50 percent of towing vessels operating in U.S. waters transmitted incorrect AIS data⁵³ Reliance on *only* AIS data to characterize vessel traffic patterns in the MA/RI WEAs was perhaps the prime basis for RODA’s challenge to the MARIPARS. It is therefore utterly baffling that the SFWF DEIS *again* relies only on AIS data to evaluate vessel navigation and safety.

AIS is an automated, autonomous maritime tracking system that provides vessel information, including the vessel’s identity, type, position, course, speed, navigational status and other safety-related information automatically to appropriately equipped shore stations, other ships, and aircraft. We do not dispute the quality and nature of AIS data; it is simply not used enough by fishing vessels in the MA/RI WEAs. AIS data is only required on vessels 65 ft. in length or greater (which does not account for most vessel activity in the area), has only been required since 2016, and may by law be turned off when further than 12 nautical miles from shore.⁵⁴

Despite this, in the DEIS’s environmental consequences analysis regarding the “Presence of Structures” (which is, confusingly, unrelated to the navigational safety analysis), exactly three references are cited:

- The navigational safety risk assessment (NSRA) prepared by SFWF
- MARIPARS
- AIS data for 2018 from the Office for Coastal Management

⁵¹ See RODA, “December 3, 2018 Workshop Documents,” <https://rodafisheries.org/portfolio/december-32018-workshop-documents/>.

⁵² See Letter from James Bennett, Program Manager, Office of Renewable Energy Programs (BOEM) to Edward LeBlanc, Chief, Waterways Division Coast Guard Sector Southeastern New England (June 4, 2019), available at: <https://www.regulations.gov/document?D=USCG-2019-0131-0044> (“As AIS is only required in fishing vessels 65 feet or greater in length, supplementing with VMS data can further characterize area vessel use”).

⁵³ See Coast Guard Maritime Commons, <https://mariners.coastguard.dodlive.mil/2018/07/03/7-3-2018-is-your-automated-identification-system-ready-for-subchapter-m/>.

⁵⁴ See generally 33 C.F.R. § 164.46

The project’s navigational safety risk assessment (NSRA) purports to rely on data other than AIS, stating that it used “vessel monitoring System (VMS) data provided by [NMFS] to assess fishing vessel traffic in the proposed project area” (later clarifying that this does not refer to raw data, but rather to the maps contained in the Northeast Ocean Data Portal). The data portal provides “heat maps” based on VMS that show relative concentration of fishing vessel effort over predetermined time periods. They do not show vessel traffic. They also do not purport to, nor would it be possible, to generate fine-scale information from VMS data sufficient to show vessel movement patterns within the WEAs. Moreover, arguably the most heavily occurring fisheries in the MA/RI WEA are either not portrayed on the data portals at all (e.g. lobster fishery, recreational fisheries) or only have a few short years of VMS data (e.g. squid fishery). Finally, SFWF prepared the NSRA to comply with the guidelines in USCG Navigation and Vessel Inspection Circular (NVIC) 02-07 (USCG 2007), which has since been canceled and replaced with NVIC 01-19 (USCG 2019). RODA asks that the NSRA instead be prepared to be compliant with the NVIC 01-19.

On public webinars for this project, BOEM claimed to have utilized VMS and VTR data to analyze the transit lane alternative. If this is the case, the DEIS provides absolutely no record of it. It would be important to show these efforts, as this statement raises serious questions in and of itself. VTR data does not provide vessel position information and, as noted above, VMS does so only on extremely broad geographic scales. There are other ways to gather information on vessel traffic and safety, but BOEM needs to do that work and provide the opportunity for public review.

d. Habitat Alternative

The “Fisheries Habitat Impact Minimization” alternative lacks sufficient description to understand what it would entail. The DEIS states that the intent of this alternative is to reduce impacts to complex fisheries habitats by excluding certain wind turbines and associated cable locations within “complex fisheries habitats” while maintaining a uniform east/west and north/south grid of 1 nm spacing. In public hearing webinars for the SFWF project, BOEM clarified that NMFS has determined “potentially complex habitat” to be a subset of “complex habitat” that will be further clarified in the Final EIS, pending the results of ongoing analysis.

It goes without saying that important fisheries habitat should be excluded from OSW development. However, the DEIS does not support informed comment on this particular alternative. Moreover, unavailability of the EFH assessment, if one has been completed by BOEM or NMFS, hinders the ability to evaluate claims regarding EFH. The DEIS states that habitat conversion “by placement of scour protection would replace EFH for species preferring soft-bottom habitat with EFH for species preferring hard-bottom habitat and could increase over time as these hard surfaces are colonized by sessile organisms.”⁵⁵ RODA is unaware of instances in which EFH can be considered “replaced” by introduced materials. More appropriate terminology might be that “scour protection would eliminate EFH for soft-bottom species.”

The description of this alternative does not include even a basic definition of what constitutes “complex” or “potentially complex” habitat, nor what indicators would factor into this decision. Later, in the Affected Environment section of the DEIS, it provides additional (but still limited) information that complex habitat includes glacial moraine and coarse sediment, whereas non-complex habitat consists of “[s]and and muddy sand and mud and sandy mud areas” but confusingly notes that complexity was determined by both “substrate sizes and composition and by their use by marine organisms” and that there may be patches of complex habitat within non-complex habitat areas.

⁵⁵ SFWF DEIS, p. 3-35.

The description of the Habitat Alternative raises multiple questions that cannot be answered using publicly available information:

- What is the habitat value of these benthic and water column areas, and what work is being conducted to characterize that?
- What scale informs the habitat characterizations?
- Why is habitat use by marine organisms that require sand/mud substrates (e.g. squid, surfclams, fluke) not factored into the analysis?
- Are the black shaded areas on the map representing surficial boulder habitat characterized as complex or non-complex?
- What threshold will determine whether a turbine location will be excluded if habitat is considered too complex?
- Is a similar habitat assessment being performed regarding the inter-array and export cable routes and the area of materials required to be introduced for its protection, where approximately 12.5 acres and 15.4 acres, respectively, of scour protection would be required where boulder substrates prevent burial of the inter-array cable and portions of the offshore SFEC?⁵⁶
- What are the potential outcomes of selection of this alternative - would it be equivalent to No Action or the Proposed Action alternatives or something else?

Additionally, the map provided in Figure 3.4.2-1 includes estimates of the radius of maximum scour protection and seafloor disturbance for each turbine location that do not appear to be supported by analysis in the DEIS, and in fact does not correlate with other information within the document.

- The figure shows a maximum radius of 112 ft. for scour protection and 656 ft. for temporary seafloor disturbance per turbine, equivalent to 39,400 sq. ft. of scour protection and 1,350,000 sq. ft. of seafloor disturbance.
- The only other information regarding the extent of seabed disturbance in the DEIS is on p. E4-11, which indicated a maximum-case scenario of 39,765 sq. ft. of scour protection and 40,365 sq. ft. of “seabed preparation” per foundation.
- It is unclear what “seabed preparation” entails or how it is related to the extent of anticipated seafloor disturbance. The DEIS notes on p. E4-11 that these numbers were “calculated by the applicant”, but no work is shown. The actual extent of habitat impact can be readily calculated using known site-specific information such as substrate type, current strength and direction, and other factors. The extent of scour and thus the necessary amount of material for protection will be greater in soft substrate than hard. The public cannot make informed comments on this or any other alternative without this crucial information.
- The proposed “maximum work area” in that figure extends beyond the lease area without explanation as to what work is occurring there. It is unclear what this refers to and whether legal authorization exists for OSW-related work outside of lease areas and associated right of ways.

BOEM must provide clarification of the Habitat Alternative, its effects, methodology for habitat assessment, and the above described information gaps to the public for additional comment before issuing a decision on this project.

IV. MITIGATION AND COMPENSATION

RODA has commented extensively on the serious deficiencies in current approaches to mitigation for fisheries impacts arising from OSW development. As projects and permitting authorities continue to

⁵⁶ SFWF DEIS p. H-75.

support piecemeal, incomplete, unpredictable, and wholly inadequate processes, each of those previous comments are reiterated and incorporated here by reference. Namely, with respect to the Vineyard Wind project (from which we have seen no change, procedurally speaking, with SFWF), we stated:

RODA strongly disagrees with the approach Vineyard Wind has taken to addressing the mitigation of impacts to fishing activities and resources, which . . . has primarily been approached through concurrent state-based methods that have been poorly integrated into the federal approval process. As we have expressed in the past, we believe that the development of a common framework for such “mitigation” must be done in a transparent, holistic, and well-structured manner that includes impacts from the wide variety of affected fishing businesses. Moreover, an appropriate mitigation plan must follow the principles of first avoiding conflicts, then minimizing those that are unavoidable, mitigating the impacts from new development through appropriate use of communications and technology, and finally—only once those have been adhered to—considering compensation for any residual losses.

The single most important question underlying the responsible development of OSW—and whether it can be completed in a way that does not pose intolerable risk to fishing, food security, and marine ecosystems—is whether adequate mitigation has been incorporated into project design. Mitigation can take the form of avoiding, minimizing, or compensating for effects caused by a proposed action or its alternatives. The most important mitigation measures are the first two (avoiding and minimizing), as fishermen’s shared goal is to preserve healthy ecosystems and continue fishing, rather than be paid for damages.

Unfortunately, due to segmentation in both regional and project-specific planning processes, means for avoiding and minimizing impacts are not prioritized. The DEIS includes a list in Table G-1 of mitigation measures that are considered in its analysis. For fisheries, these are:

- Spacing of approximately one nm between turbines;
- Burial of the inter-array cable and SFEC offshore to a target depth of 4-6 feet;
- Installation of the SFEC sea-to-shore transition via HDD;
- Implement Best Management Practices to minimize impacts on fisheries (“as appropriate and feasible”);
- Siting of the SFWF and SFEC offshore were informed by site-specific benthic habitat assessments and Atlantic cod spawning surveys;
- Commitment to collaborative science with the fishing industry;
- Mark each WTG with both USCG and approved aviation lighting;
- Require all project vessels to comply with regulatory requirements to prevent spills (and the details of SFWF’s particular oil spill response plan are, perplexingly, confidential according to BOEM’s project docket);
- Manage accidental spills of oils or other hazardous materials through the project’s response plan;
- Guide fishing industry communications by the Project-specific Fisheries Communications Plan; and
- Implement a communication plan during offshore construction to inform all mariners of construction activities and vessel movements.

These commitments largely have very little to do, in practice, with minimizing and avoiding impacts to fishing. Some are merely informative in nature or commit to following existing laws, others lack sufficient detail to know how they would be implemented or enforced, and the rest (such as burial depth and HDD installation) are not accompanied by any analysis or evidence to inform the public of their efficacy or desirability.

In contrast with considerations in the DEIS, several years ago the U.K.'s Crown Estate worked directly with fishermen who had experience with OSW to identify actions that would reduce at-sea impacts to fish and fishermen from OSW.⁵⁷ Showing the benefit of direct communications between the regulatory community and fishermen, these actions are far more specific and plainly show their higher mitigation value:

- Improved mapping of potential seabed hazards;
- Timely provision of seabed maps showing precise location of potential hazards;
- Proactive identification of clean and cable-free corridors between the turbines that could be suitable for mobile gear;
- More effective cable burial beneath the seabed;
- Fishing friendly methods of cable protection, such as the use of concrete mattresses as an alternative to rock dumping;
- Where rock dumping is required, more accurate deposition of rocks over the cables;
- Clearing debris left on the seabed following the construction of wind turbines;
- Better communication and working relationships between fishermen and wind farm service vessel operators;
- More regular monitoring and reporting of cable exposure; and
- The removal of all seabed structures, material and debris following the decommissioning of wind farms.

The DEIS fails to include or consider any of this known information. To fulfill the requirements of NEPA, BOEM must work directly with fishermen and fisheries experts to develop a full range of mitigation alternatives for consideration in this action.

The DEIS also fails to analyze the mitigation measures identified in the scoping process. These include:

- “Consideration of a range of cable burial depths to address potential for anchor strikes from tug/barge and fishing vessels.
- Annual cash donation directly to affected fisheries
- Alternatives to transit lanes, simulators, specific lighting schemes, and turbine spacing, as well as mechanisms for improved communications, including providing real-time construction information on systems fishermen are actively using, and “one-stop shopping” for reporting wind farm emergencies such as oil spills and interactions with fishing gear, such as snags.”⁵⁸

There is no timeline identified in the scoping document to indicate when this may occur. It is unclear when the issues raised in the scoping period will be addressed. There are a number of other issues raised in the scoping comments that, if addressed in this DEIS, would have better informed the public and fishermen, whose livelihoods and way of life are at risk.

a. Fisheries Communication Plan

RODA commends Ørsted for having the largest network of Fisheries Liaisons and Representatives of any OSW developer in the U.S. Even more laudable is its decision to employ well-regarded fisheries scientists

⁵⁷ The Crown Estate, Changes to fishing practices around the UK as a result of the development of offshore windfarms – Phase 1 (Revised) (2016) <https://www.thecrownestate.co.uk/media/2600/final-published-ow-fishing-revised-aug-2016-clean.pdf>.

⁵⁸ BOEM (2021). Scoping Summary Report for the South Fork Wind Farm Environmental Impact Statement. https://www.boem.gov/sites/default/files/documents/renewable-energy/Scoping-Summary_0.pdf.

to coordinate its monitoring plans and other research efforts, which have led to noticeable improvements in its scientific portfolio. This collection of respected individuals could provide the basis of a communication, education, and collaboration powerhouse if the Fisheries Communication Plan (FCP) was improved and if these specialists were provided more opportunity to influence project design and direction. Just as Deepwater Wind was able to be more nimble in its approach to the Block Island Wind Farm because the Rhode Island SAMP supported such efforts, BOEM's adoption of a more clearly structured process for addressing fisheries interactions from federal projects could enable community-level solutions to again take precedence over lobbyists and attorneys. Again, the quality of communication between industries matters far more than the quantity.

However, setting aside that a bottom-up and collaborative approach to mitigation would be far more effective than what currently occurs in OSW permitting, the informative elements of mitigation in the DEIS are critically flawed in light of the current reality. The DEIS repeatedly references SFWF's FCP as a core component of its mitigation strategy, as evidenced in multiple references to the prospect that the plan "would help ensure that fishing businesses could continue to operate with minimal disruption." Unfortunately, the Fisheries Communication Plan does not offer satisfactory mitigation in four regards: (1) it is extremely out of date; (2) several of its commitments for existing project phases in fact have not been implemented; (3) it does not evidence a full understanding of fishermen's communication styles; (4) it focuses too narrowly on one-way communications.

1. Outdatedness

The FCP is described as a "living document that will expand and evolve as we continue to learn and move through different phases of the project." However, the version provided with the DEIS, and referenced therein, has not been updated in nearly three years (since May 2018). Among other outdated information, it includes:

- A commitment to "explore creating a Regional Fisheries Science Collaborative" (which was formed as ROSA in early 2019);
- Information that it "currently envisions a North-South grid layout of the turbines in order to optimize access and navigation for fishing industry vessels. However, additional input is being gathered to inform the final turbine configuration and siting";
- An out of service website (dwwind.com) as a contact for reporting gear loss;
- The wrong parent company (Deepwater Wind instead of Ørsted); and
- Outdated names and contact information for fisheries representatives.

The FCP states that Deepwater Wind would report on progress and concerns raised in its discussions with fishermen to BOEM periodically or every 6 months. If that occurred it should be part of the project record and subject to public comment. We were also able to locate a second version of the FCP, dated January 2021, on Ørsted's website. This version has removed the language about turbine layout and updated some other elements but not others. For example, neither the SFWF website nor the FCP contain the names of Ørsted's fisheries representatives.

2. Unfilled Commitments

The FCP commits to several actions in project phases leading up to the present that, to the best of our knowledge, have not been fulfilled. There are other items for which requests have been made to Ørsted to improve its implementation of the plan, which have not been met. These include, among other items:

- The "[l]ist of fishing industry outreach" includes meetings through June 2018, but it is rather unclear whether most of them have any relationship to fishing. An accompanying graph appears to

indicate that these meetings focused solely on recreational fishermen. Ørsted has, of course, met with fishing interests including RODA frequently since 2018 but it would be useful to have available a report on the quality of those meetings, concerns raised, and actions taken to address any concerns.

- Several issues are noted as being raised by fishermen that are not addressed in the FCP or DEIS, including siting the cable route and turbines, insurance concerns, etc.
- The list of Fisheries Representatives is outdated--at least the individuals listed in New Bedford and Montauk are no longer serving those roles. Ørsted's website also does not include a list of Fisheries Representatives.

The FCP also states that Ørsted will facilitate communication through a Fisheries Liaison, a project website, and public notices to mariners and vessel float plans in coordination with USCG. Developers currently circulate "Notices to Mariners" via emailed PDFs to inform fishermen of on-the-water activity on a weekly or otherwise regular basis. This is simply not an effective means of notifying fishing vessel captains and crews as they do not access PDFs either while preparing for a trip or while underway.

Repeatedly, fishermen have requested Ørsted and other Atlantic leaseholding developers to improve the basic dissemination of project information--shoreside (as described in a previous section), and perhaps more importantly on the water. In Joint Industry Task Force meetings last year, fishermen and OSW developers jointly scoped a communications project that would have two core components: a website for those engaged in management and outreach discussions, and an app for mariners. The latter is a particularly urgent need given the difficulties in communicating with fishing vessel crews and safety ramifications. To be effective, this project must be a joint effort of the two industries, as it requires developers' participation in designing usable input protocols and fishermen's input on accessibility to ensure its utility.⁵⁹

Unfortunately, while the fishing representatives on the Task Force prioritized development of this project, the OSW developer members did not. RODA urges BOEM to work with us to ensure that we can effectively get this critical information to fishermen, and we are happy to share details of the project scoping. We also respectfully request that timely provision of relevant project information for these purposes in a format determined by the fishing community be a condition of any OSW permit that BOEM may issue in the future.

3. Cultural Appropriateness

The FCP largely follows BOEM's Best Management Practices for communication, but should be updated with direct input from the larger fishing community. Several items included in the action list do not align with our understanding of preferred communication styles among fishermen.

- The FCP repeatedly references contact lists as a primary means of communication, but many members of the fishing community do not frequently use email or complain about receiving too many from the multitude of OSW developers;
- The FCP emphasizes the use of surveys as a means to gather information, though many fishermen have voiced concern to us over providing information to OSW developers through surveys and they tend to suffer from low response rates;
- The FCP appears to prioritize quantity over quality of meetings by referencing metrics of number of meetings, names on contact lists, etc.

⁵⁹ We emphasize that efforts to improve OSW information dissemination without direct co-planning from fishing industry leaders have typically fallen flat, as fishermen and their communities have unique preferences for information consumption that cannot be met through outside-in approaches.

- Again, Notices to Mariners in PDF format do not achieve their intended purpose;
- The language in Appendix B should be wholly reconsidered or removed, as it reads condescendingly. It appears to present an approach focused on educating fishermen about a different worldview than viewing them as experts and partners in solving problems. Some of these inappropriate statements are:
 - “[T]he quality of the relationship is as important as the content of the presentation.”
 - “DWSF staff and contractors are prepared to listen to concerns that may be coming from bad past experiences or fear and to answer questions without getting defensive.”
 - “Communication should be a two-way dialogue whenever possible. Fishermen need accurate information to make informed decisions and provide informed input, but two-way dialogue is the best way (1) to ensure they understand the information, (2) to gather informed input, and (3) to increase credibility in the end product.”
 - “Bad news doesn’t get better with age. Delaying the release of information or decisions may raise questions among fishermen about the cause of the delay and spur rumors that information is being controlled or manipulated. Immediate release of all news, good or bad, is important to maintain transparency.”

BOEM and Ørsted should consider whether they would be satisfied with this language if on the receiving end, or whether it paints the subject as simply uninformed or naive, particularly when the authors are from such different cultural backgrounds. RODA urges a revisioning of how fisheries and OSW communications are approached between the two industries and urges BOEM to play an active role in such an effort.

b. Compensatory Mitigation

Due to the significant procedural shortcomings in OSW to date failing to minimize conflicts through project siting and design, compensatory mitigation has become a central focus of fishermen with regard to the project review. To date, we are only aware of two efforts to address compensatory (financial) mitigation to fisheries impacts from the SFWF project:

- In Rhode Island, the Ocean Special Area Management Plan, which was developed through extensive public input and review to facilitate the Block Island Wind Farm in RI state waters, requires a developer to engage in direct negotiations with a state-convened Fishermen’s Advisory Board. Earlier this month, news outlets reported that the process had reached an “impasse.”⁶⁰ Although details are sparse, these reports indicate that Ørsted proposed an offer which the fisheries representatives rejected based on different approaches to impacts valuation.
- In New York, Article VII of the Public Service Law imposes a Certification Review Process for Major Electric and Fuel Gas Transmission Facilities administered by the state’s Public Service Commission. Through this process for SFWF, an administrative law judge is in the process of drafting an advisory opinion regarding, among other items, mitigation measures required to receive a certification for plans to construct the project cable. Lacking other opportunities to secure compensatory mitigation, NY fishing interests advocated to include it through this process, at considerable time and effort. Although not originally included in the project application, a “Joint Proposal” from the signatory parties (SFWF, LIPA, and community groups but not including fisheries representatives) currently contemplates a “robust Fisheries Compensation Plan to offset the potential for any disruption to mariners during various phases of the Project.” However, this plan lacks any specific details. Furthermore, PSC only has jurisdiction over state waters portions

⁶⁰ <https://www.providencejournal.com/story/news/2021/02/02/ri-fishermen-offshore-wind-developers-hit-impasse-south-fork/4336847001>.

of the project, therefore any provisions for compensatory mitigation, even if they are ultimately required, would apply only to the portions of the export cable within 3 miles of shore. RODA asks that the plan be revised to include the full project area.

- In Massachusetts, there is no publicly available information as to potential compensatory mitigation from SFWF to affected fishing communities. However, Massachusetts used its authority under the Coastal Zone Management Act to negotiate a settlement on behalf of fishermen and fishing businesses in the state. While it can be assumed that a similar process may occur for SFWF, there is no policy or process in place to understand whether or how this would occur, what would inform valuation, or for what purposes funds would be used.

This situation is incomprehensible to fishermen (or anyone), contrary to public participation principles, and has been likened by our members to a game of “Whack-a-Mole” where they are left not knowing where to turn, what is coming next, or whether they are included at all.

1. Comprehensiveness and Inclusivity

We have repeatedly urged BOEM to coordinate, or at least require development of, an appropriate regional-scale fisheries compensatory mitigation plan. It still has not. We now perpetuate the bizarre outcome that individual states are, in practice, deputized to devise payment plans from the project developer through their Coastal Zone Management Act (CZMA) review or other state-specific legal authorities. Despite compensatory mitigation requirements *not being an enforceable policy* under CZMA, a series of political twists and turns has led to BOEM considering—as the primary fisheries mitigation tool for a federal waters project—payments made to one state. This process for direct negotiation with states made sense when originally envisioned in the Rhode Island Ocean Special Area Management Plan. However, leaving compensatory mitigation to individual states to negotiate through their widely varying policies for projects that span multiple states in both geography and impacts makes no logical—or legal—sense.

Logically, a regulatory process that forces fishermen and family-owned fishing businesses to negotiate with multinational energy companies (many of which are oil and gas companies with well-known experience in such affairs) simply in order to avoid insolvency is ethically indefensible. The former do not have adequate resources, and the latter are incentivized to gloss over harms to fishing. If negotiations fail, there is no backstop. If they “succeed,” there is no telling whether they include all affected parties—or even the most affected parties—or whether they are structured in a way that provides relief in a way that is appropriate for the community in question.

The approach to SFWF, and other projects, cannot be viewed in isolation, and fishermen cannot be expected to maneuver with each of the 15 or more projects anticipated across their grounds over the next ten years or less, while maintaining their livelihoods. Our fishing heritage must not depend on who may have more savvy or can devote more time and resources to outcompeting the other. Moreover, fishermen and OSW developers are not well-suited to argue what constitutes best available science in closed rooms, this should be done transparently and inclusively with science experts following best practices in modeling and peer review.

Legally, as RODA has repeatedly pointed out, the Comity Clause of the U.S. Constitution prohibits discrimination based on state residency. It is unclear how BOEM’s enforcement of state-led policies that result in different outcomes for federally permitted fisheries participants based on their state of residence could be constitutionally defensible. In addition to these disparate outcomes, these payment schemes grossly undervalue likely fisheries losses because of a global lack of relevant socioeconomic research and an unwillingness from developers to assume responsibility on cumulative scales.

2. Prerequisite for Project Approval

There are several reasons any project approved by BOEM must require complete, science-based compensation to offset impacts to fisheries. As no OSW project has received a Record of Decision from BOEM to date, and BOEM has never engaged the fishing community in any dialogue regarding compensation on a project-specific or cumulative scale, there is significant uncertainty regarding BOEM's approach to this issue and whether such mitigation will be required. The only available information is BOEM's Best Management Practices, which describe several types of compensation measures a developer could consider, but on their own provide absolutely no incentive to do so. In contrast, three authorities do support BOEM imposing a compensatory mitigation requirement: NEPA, OCSLA, and customary practice in the U.S. and abroad.

While NEPA does not provide a blanket substantive duty for an agency to mitigate all adverse environmental effects of a proposed action,⁶¹ it does require federal agencies to consider alternatives that include measures mitigating harm to the human and physical environment in order ensure procedural integrity and greater transparency.⁶² Mitigation measures may be separate alternatives or may be included directly in the proposed action.⁶³ Specifically, such mitigation includes: (a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; (e) Compensating for the impact by replacing or providing substitute resources or environments.”⁶⁴ BOEM must consider alternatives that provide fair and complete compensatory mitigation before finalizing the DEIS.⁶⁵

So too does OCSLA indicate that it is BOEM's authority to ensure impacts to existing ocean uses are minimized and compensated. The Purpose and Need of the DEIS states “BOEM's action is needed to further the United States' policy to make [OCS] energy resources available for expeditious and orderly development, subject to environmental safeguards . . . including consideration of natural resources and existing ocean uses.” It is *not* whether to simply approve an OSW project because a power purchase agreement is in place, as is the justification used in the DEIS, but to ensure that safeguards are in place to protect fishermen and the environment.

To repeat, compensatory mitigation alone is not sufficient to meet NEPA requirements of avoiding, minimizing, and mitigating impacts to fisheries, nor does its implementation assure that an OSW project has been designed in a way that does not unreasonably interfere with fishing operations. As the December 2020 DOI legal memorandum notes “it is important to observe that any compensation system established by a lessee to make users of the lease area whole financially does not negate interference-- indeed the

⁶¹ Robertson v. Methow Valley Citizen's Council, 490 U.S. 332, 352 (1989).

⁶² 40 C.F.R. § 1052.14(f).

⁶³ See Nancy Sutley, CEQ memo [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation and Monitoring Guidance 14Jan2011.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation%20and%20Monitoring%20Guidance%2014Jan2011.pdf).

⁶⁴ 40 C.F.R. § 1508.20.

⁶⁵ It is imperative that BOEM, in considering alternatives for compensatory mitigation, do so independently and in an unbiased fashion. It must base such alternatives *only* on consultation of “neutral parties without a financial interest in implementing the mitigation” Sutley at 5. We are alarmed by multiple indications that BOEM may have extensively discussed valuation and adequacy of compensatory mitigation schemes with OSW developers for specific projects outside of public comment processes in the past.

creation of such a system presumes interference. As such, any proposed compensation process should not be viewed as ‘curing’ any interference [to accessing historic fishing grounds under OCSLA] since the statute does not provide for such a cure.”

Customary practice supports compensatory mitigation for fisheries impacts after efforts to minimize and mitigate impacts have been fully employed. From an equity perspective, fishermen are by far the most impacted group with respect to OSW development. Despite this, financial offsets offered to fishermen pale in comparison to those invested by OSW developers, investors, and supporters to other interests. Although most of the details of these agreements remain confidential, it is known that SFWF has offered a “community benefits package” worth \$29 million to the Town of East Hampton, NY, primarily for the use of its roadways.⁶⁶ Why wouldn’t fishermen be compensated at least with parity for the areas they rely on to feed our communities? BOEM must hold developers accountable for ensuring that such “benefits packages” are afforded to fishermen; it is insulting for them to be treated as any less important than town residents.

Specific to fishing, most other countries that are implementing OSW development have explicit policies or laws directing such compensation to occur. Therefore, such requirements are both practical and expected by OSW investors and developers, who operate on global scales. The United States must, at a minimum, not afford lesser care to our historic, essential (and more heavily regulated) seafood sector than those constituents receive elsewhere. Some examples include:⁶⁷

- In the United Kingdom, there is no legal requirement for compensatory mitigation. However, in practice, disruption payments are made for “demonstrable loss of fishery access or economic disadvantage caused directly to active fishing vessels by disturbance or displacement.” Best practices put forward in the public-private Fishing Liaison With Offshore Wind And Wet Renewables Group (FLOWW) (convened by the Crown Estate or BOEM’s approximate equivalent) detail the process for determining values. While there has been criticism of this structure in the UK, and it would merit significant changes before adoption in the U.S.,⁶⁸ the point remains that engagement with, and adequate compensation of, fishing communities with federal oversight is the norm.⁶⁹
- In Denmark, a developer must contact commercial fishermen in the area to negotiate compensation for “documented loss of earnings” by law.
- In India, compensation is required for disruption according to government policies on “rehabilitation and resettlement.” Affected fishing communities may also be able to seek constitutional recourse to protect their right to freedom of profession and right to life under Articles 19-21 of the Indian Constitution.
- In China, if fishery facilities are located on a project site, the developer may need to negotiate compensation with the owner of these facilities on a case-by-case basis, or pay compensation based on the local compensation standards.
- In Japan, OSW projects must not cause any adverse impacts on fishery activities. A developer must consult with the fisheries members of local councils (kyogikai) to determine whether a project could cause any adverse impacts--if any are identified the government will not designate the site as an OSW zone.

⁶⁶ <https://www.eastendbeacon.com/offshore-wind-developers-offer-east-hampton-29-million-for-cable/>.

⁶⁷ Hogan Lovells, Offshore Wind Worldwide Regulatory Framework in Selected Countries Feb. 2020; FLOWW guidelines.

⁶⁸ For example, it contemplates requiring retirement of fishing capacity as a prerequisite to compensation, which is neither justifiable nor conducive to coastal community protection

⁶⁹ [floww-best-practice-guidance-disruption-settlements-and-community-funds.pdf \(thecrownestate.co.uk\)](#).

- In Korea, the law requires developers to obtain consent from “interested parties” (including persons with fishing rights) for the use of public waters and a developer is liable to compensate fishermen for losses, e.g., reduction in the revenues of fishing business, arising out of the use of those waters.
- In Taiwan, as fishermen hold exclusive rights that may be impacted by OSW, obtaining an OSW permit requires a compensation agreement with the fishermen’s association. The government has promulgated a guidance document setting the standards for such negotiation.

As noted earlier, the need for the DEIS to consider transparent approaches to compensatory mitigation was raised during the SFWF scoping process, and it is entirely unclear why it is not included in the range of alternatives.

c. Damage to or Loss of Fishing Gear

The DEIS incorrectly identifies adverse project impacts to commercial fisheries due to damage to or loss of fishing gear as “negligible to moderate.” The appropriate significance criterion for damage or loss of fishing gear is “moderate to major,” and the DEIS should be revised to correct this error. According to the DEIS significance criteria definitions for impacts to commercial fisheries, moderate impacts are impacts that are “unavoidable, but [environmental protection measures] EPMs would reduce impacts substantially during the life of the project” and this category is generally appropriate for impacts that are “eliminated” during the lifetime of the project, at which time “the affected activity or community would return to a condition with no measurable effects if proper remedial action is taken;” a major impact includes “substantial disruptions” where “measurable effects” are felt “indefinitely, even if remedial action is taken.”⁷⁰

The DEIS, and common sense, make it clear that impacts to fishing activity in the form of damage to or loss of fishing gear would be “substantial” and “indefinite.” The DEIS states that “some individual operators of commercial fishing or for-hire recreational fishing businesses could experience long-term, minor to moderate adverse economic impacts during Project O&M as a result of reduced fishing access, damage to or loss of fishing gear, and decreases in target species abundance or availability.”⁷¹

The adverse economic impacts experienced by commercial fishermen operating around the project area and in areas transited by vessels engaging in O&M activity would be “indefinite” over the long lifetime of the project and are indeed “substantial,” not “minor to moderate.” BOEM should correct this categorization. In any case, the DEIS does not categorically define the term “substantial” in the context of level of impact of proposed activities. Nonetheless, given the common definitions of the words “minor,” “moderate,” and “substantial,” it would be inappropriate to state that the gear loss reasonably expected to be experienced by commercial fishermen over the lifetime of this project will be “minor to moderate.” Commercial fishermen on the East Coast already experience the loss of thousands to tens of thousands of dollars of fishing gear during OSW site characterization and other activities, and they would experience such losses indefinitely over the course of this and other projects. Additionally, fishermen must necessarily avoid placement of gear in areas regularly transited by vessels engaging in OSW activity, because these vessels regularly travel through fishing grounds and often destroy fishing gear.

The DEIS does not propose remedial action for the indefinite impacts that would necessarily be experienced by commercial fishermen from these activities, therefore there is no remedy preventing these impacts and resultant injuries from occurring indefinitely. Such impacts, whether correctly classified as “substantial” or (as in the DEIS) incorrectly as “minor to moderate,” being reasonably foreseeable to be “indefinite” over

⁷⁰ SFWF DEIS Table 3.5.1-15, p. 3-89.

⁷¹ DEIS pp. 3-143.

the lifetime of the project, clearly necessitate the appropriate impact classification of “major” because any “indefinite” impact requires the assignment of this classification. Again, we ask BOEM to make this adjustment accordingly.

The economic burden from losing fishing gear must be fully accounted for and compensated, in order to avoid unreasonable interference. To maximize catch, fishermen will use the ‘best’ gear available to them onboard, meaning that when gear is lost or damaged, any secondary or tertiary gear will be less efficient, if they are fortunate to even have backup gear. Furthermore, replacement for gear lost may not be readily available. Gear providers, such as net builders, may have other orders to fill or may only construct certain types of nets or mesh sizes twice a year. Given management and biological restrictions on fishing seasons, the impacts of delays can be substantial. These types of burdens should be accounted for and reflected in the compensation provided through claims.

In fact, BOEM has already established a pattern and practice of permitting OSW project siting and construction activities without due consideration of impacts to commercial fishing in the form of loss to fishing gear, or requiring prerequisite site assessment information from G&G surveys that necessarily require the displacement of fishing activity, disrupt the normal placement of fishing gear, and result in the loss of fishing gear.

BOEM must revise the DEIS to include the “major” impacts to fishermen in the form of damage to or loss of fishing gear, and it must implement a standardized approach for gear loss claims related to conflict with OSW areas. Currently information is poorly communicated on how gear loss claims can be made, and what qualifies for a claim. Additionally, the required information for proof is inconsistent across developers, projects, and project phases. For example, the current SFWF instructions for gear loss claims (published Dec 2020)⁷² differ from the gear loss instructions BOEM put out for public comment (submitted May 2018)⁷³ for the same project. For mariners who are already dealing with a loss of gear and catch, the process to file a claim should not be overly complicated and onerous.

While some fishermen have experienced some success with gear claims, a standardized and unbiased policy should be implemented across all OSW projects in the region moving forward. To that point, information required in a claim should not differ if gear is lost in the SFWF project or in a lease area held by another developer. Due to the geographic proximity of multiple proposed projects and export cables, and the large number of such proposed projects, it would be unreasonable to expect fishermen to determine exactly which claim process applies if they are not coordinated. Similarly, the process for filing claims also cannot be different among varying states; these are federal waters and federally-permitted fishermen must be treated equally.

Evaluation of gear loss claims should be independent of the payee of the claim; the SFWF gear claim instructions state that claims will be evaluated by Ørsted employees and representatives. This must be changed. An objective and impartial “jury” should be responsible for determining the validity of gear loss claims. Lastly, economic loss payouts should be for the full amount that is lost from being unable to fish, not 50 percent of the economic loss as stated in Ørsted’s gear loss instructions. Again, if Ørsted is willing to provide a \$29 million dollar “community benefits package” to the town of East Hampton, NY, but only willing to compensate fishermen for half of their losses, this is not in line with the definition of acceptable, nevermind preferable, mitigation.

⁷²<https://orstedcdn.azureedge.net/-/media/www/docs/corp/us/mariners/gear-loss-claim-1220.ashx?la=en&rev=d1a83b4a98b24a7aa441faf858a2bcb3&hash=F750409DAFEE5DCA16ACD0A520921C5A>

⁷³https://www.boem.gov/sites/default/files/renewable-energy-program/State-Activities/NY/App-B_Fisheries-Communication-Plan_2018-09-26.pdf.

The piecemeal and elective approach for gear loss claims, varying from developer to developer is unreasonable. BOEM should provide oversight and work with both the fishing and OSW industries to develop a practical and equitable claims policy as outlined in BOEM's Best Management Practices.⁷⁴ This claims policy should include mitigation of O&M activities, e.g. requirements for accessible and acceptable notices to mariners, gear avoidance measures for OSW vessels engaged in O&M activities, requirements to record transits and photograph all gear interactions, and plans and procedures for recovering impacted fishing gear and undertaking the full efforts required to return impacted gear to its rightful owner, and the provision of due compensation for lost fishing revenue associated with damage to the gear. The responsibility for undertaking these basic activities to mitigate and compensate for business interruptions coming from direct impacts resulting from such reasonably foreseeable project activities rests solely on the project developer and should be treated accordingly.

V. DECOMMISSIONING

BOEM must require OSW developers to fully decommission and return the lease area to its natural state (to the greatest extent possible) as a full requirement of the lease terms.⁷⁵ The DEIS refers to the decommissioning of the SFWF as "conceptual." No part of decommissioning should be considered "conceptual" or allow for decommissioning to potentially "not occur for all Project components", as suggested in the DEIS.

The DEIS contains inadequate analysis and details of decommissioning the SFWF. No details are provided apart from the statement that decommissioning "would follow the same relative sequence and time frame as construction, but in reverse." This is both ludicrous and simply inadequate. It is not possible to "reverse engineer" a monopile from the sea bed. The public cannot be asked to provide comments with the lack of information regarding the following:

- What is the estimated total length of cable that won't be removed?
- What volume, if any, and type of material(s) will be left in or under the sea floor?
- What is the total time developers will have to remove turbines?
- What is the decommissioning process for the onshore components of the project?
- What level of GHG emissions will be generated in the decommissioning process?
- How deep will the turbines be cut off their bases? Will it be 2 meters similar to proposed burial depth of cables?
- How much of the turbines can be recycled, and would such recycling be required?
- What is the process for extending the lease if turbines are upgraded instead of decommissioned?
- What is the process for the public to comment on the decision to decommission and its associated requirements, e.g. extent of turbine removed?
- How much scour material will be removed?
- What happens if the project has to be decommissioned before the end of the lease period?
- What happens if a developer can't afford decommissioning?

⁷⁴ Ecology and Environment, Inc. 2014. Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf Report on Best Management Practices and Mitigation Measures. A final report for the U.S. Department of the Interior, Bureau of Ocean Energy Management, Office of Renewal Energy Programs, Herndon, VA. OCS Study BOEM 2014-654. 98 pp.

⁷⁵ RODA is unable to locate an executed lease agreement with SFWF, but the draft version of the lease for OCS-A 0486 on BOEM's website states "the Lessee must remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seafloor of all obstructions created by activities on the leased area."

As RODA has pointed out in previous comment letters, if no further NEPA review of the project decommissioning will occur in the future, the DEIS should contain explicit details regarding decommissioning activities. Otherwise, this project would be in violation of NEPA, by not completing the required public comment process and consideration of the environmental impacts of this major federal action. At a minimum there should be assurances as to the process and the factors BOEM will evaluate in making future decisions, in light of the vagueness of the DEIS. The DEIS should include any approved methods for removing turbine structures from the seabed. All removal methods should minimize further negative impacts to benthic habitat. The potential use of explosives in decommissioning is especially of concern for the negative impacts to benthic habitat and fishery resources, and if it is used, BOEM must conduct a NEPA-compliant environmental review to assess the potential impacts of that activity, which are unknown at this time.

The risk to safety for the fishing industry may remain even after an OSW project is decommissioned. The minimum depth at which monopile foundations will be cut is 1 meter.⁷⁶ This is half the depth of the proposed cable burial depth. The fishing industry is highly concerned about gear hanging up on cable buried at 2 m. If full decommissioning is not possible or required then the EIS analysis should reflect this.

BOEM should analyze the capacity and needs of the existing electricity grid to determine whether early decommissioning may occur and include this information in the DEIS. The Utgrunden OSW project in Sweden was decommissioned after only 15 years of usage. Research on the performance of the WEA determined that between 2001-2003 the WEA produced 31.4 GWh per year, with a capacity factor of about 34%.⁷⁷ The main factor the researchers thought was affecting performance was grid faults, likely caused by conventional power plants used to balance the grids. The efficiency of OSW projects may be drastically reduced if grid infrastructure or environmental conditions do not allow them to operate at maximum capacity, raising further questions about their environmental impacts and benefits. The onshore grid capacity must be discussed when considering costs and benefits of new OSW projects.

As with other topics, alternatives for decommissioning were raised through the scoping process that are not address in the DEIS, including “[a]lternatives to cable decommissioning that remove all cables, etc. rather than decommissioning buried cables in-place.” The DEIS must be revised to include a full analysis of decommissioning, as it is within the scope of this environmental review.

BOEM has provided no information regarding the economic considerations of decommissioning. The cost to decommission a 500 MW OSW development was estimated by Adedipe & Shafiee.⁷⁸ They estimated the total decommissioning costs (including a 10% contingency) to range from £145,313,411.69 (min) to £241,495,688.48 (max). This is a massive cost and there is no indication in the DEIS as to who will pay for that or what is being done to minimize that. A report on decommissioning from 2015 estimated decommissioning costs to be over €1 million per turbine (€ 200,000 to € 600,000 per MW) equivalent to roughly 60 to 70% of installation costs.⁷⁹ The regulations at 30 C.F.R. § 585.516 require developers to

⁷⁶ Topham & McMillan. 2017. Sustainable decommissioning of an offshore wind farm. *Renewable Energy*. 102 (b): 470-480.

⁷⁷ Kuhn et al 2005. Utgrunden Offshore Wind Farm: Results of 5 years of operation and research. Copenhagen Offshore Wind. https://d1wqtxts1xzle7.cloudfront.net/46365202/M.Kuehn_Utgrunden_5Years_Ny_paper.pdf.

⁷⁸ Adedipe, T., Shafiee, M. An economic assessment framework for decommissioning of offshore wind farms using a cost breakdown structure. *Int J Life Cycle Assess* (2021). <https://doi.org/10.1007/s11367-020-01793-x>.

⁷⁹ Logistics and Cost Reduction of Decommissioning Offshore Wind Farms Gillian Smith, Chris Garrett & George Gibberd DNV GL.

reserve funds for decommissioning in a separate account to make sure they can fulfill their obligations to the American public. The DEIS does not disclose how the cost of decommissioning was calculated nor the amount of bonded funds, preventing the public's ability to submit informed comments.

The fishing industry is at risk of permanently losing fishing grounds depending on the actual approach to decommissioning. If the developers cannot afford to decommission or posit that the turbines or associated structure are best left in place as an artificial reef, this could result in a permanent loss of fishing grounds, which is not analyzed within the DEIS.

VI. ANALYTICAL DEFICIENCIES

Substantial revisions must be made to this DEIS before the public can be expected to comment adequately. Due to an overall lack of quality analysis and multiple errors in the document, the information within the DEIS is insufficient for the public to understand what actions are being taken and what their impacts could be. We urge BOEM to fully consider all comments it receives regarding how to improve this DEIS to provide adequate NEPA and scientific analyses. Previous suggestions offered by fisheries experts such as NOAA Fisheries, the regional fishery management councils, fishermen and fishing businesses, and RODA regarding the Notice of Intent for this DEIS and the Vineyard Wind I project will also be informative for improving the document. We ask that BOEM revisit these documents and the recommendations therein.

a. Omitted Topics

Several items and impacts that NEPA requires to be included in the DEIS are entirely missing. Some examples are provided here; others are raised elsewhere in these comments. However, even identifying whether certain analyses are present or absent was challenging due to the fact that the DEIS buries many important analyses (such as cumulative impacts) in appendices, and the docket is incomplete with regard to the project record.

1. Energy Analysis

Perhaps the most noticeable information missing from the DEIS is any analysis of the electrical benefits of SFWF (or multiple projects in the cumulative activities scenario) and their relation to energy demands or the power grid. It is simply impossible to evaluate the extent of the environmental impacts, and the trade-offs with a potential public benefit, of the proposed action without a clear understanding of the power the project will realistically produce. This is clearly required by the NEPA regulations at 40 C.F.R. § 1502.16(a)(10) referenced above as an integral technical consideration of the project; without it, BOEM simply cannot make a reasoned decision amongst alternatives.

The public should also be able to evaluate the interconnectedness of OSW to the oil and gas industry. The DEIS contains multiple uncorroborated claims such as that the project would provide the benefit of “[p]romotion of renewable energy to help ensure geopolitical security; combat climate change; and provide electricity that is affordable, reliable, safe, secure, and clean.”⁸⁰ While RODA unequivocally supports efforts to address climate change, the DEIS provides no analysis to show what mitigative benefits to climate change are offered by the proposed project—or even cumulatively from all proposed U.S. OSW projects—in order to evaluate the veracity of conclusions such as this one. Serious questions have been raised as to the net energy, economic, and environmental impacts of OSW that BOEM has not made even a cursory attempt to answer in this DEIS (or elsewhere to our knowledge). This is especially important in order for

⁸⁰ SFWF DEIS, p. 4-4.

the public to evaluate whether there are in fact net benefits, or whether the primary driver behind the rush to develop is a motivation by the oil and gas industry to continue to make profits.⁸¹

A sufficient energy analysis must also include considerations regarding transmission. Many OSW project plans are entirely contingent on extensive upgrades to onshore transmission systems; such upgrades have clear environmental, economic, and energy security impacts. BOEM should expand its analysis of the offshore cable transmission system, including the environmental costs and benefits of coordinated transmission.

Finally, fishing companies require stable and affordable electricity to provide food security. Like all food production facilities, fish processor businesses in particular rely on refrigeration and mechanical operations to store and produce food products.⁸² Lack of information regarding OSW's potential impacts on the stability and price of energy prevents the opportunity to generate informed comments as to the full impact of OSW to these fish processing businesses.

2. Cost Analysis

There is little peer-reviewed information regarding the costs and benefits of OSW. Most of the information in the public domain is generated by OSW developers or trade associations and based upon information deemed confidential so that it cannot be verified. Rather than provide unbiased evaluations of project costs, the DEIS includes no details whatsoever of project price or overall economic considerations, in violation of 40 C.F.R. § 1502.16(a)(10).

The true ecological cost of OSW is site specific. The DEIS appears to treat the overall SFWF project cost and the contract price for the power purchase agreement as confidential (presuming that is the reason they are not included in the DEIS). However, without knowing these factors, the amount of federal, state, or local taxpayer subsidies devoted to the project, projections of the full cost to ratepayers (including the contract price in addition to any predictions of project contingencies or overages), and portion of project costs that will accrue to foreign markets, the public cannot make even a basic informed evaluation of the project's desirability or whether any adverse and irreversible environmental impacts are worth the overall project benefits.

OSW appears to have widely different costs and benefits as compared to other renewable power sources. A comparison of costs of OSW to onshore wind back in 2009 concluded that onshore wind was more cost effective at that time, although improving technology may change that in the future.⁸³ A more recent review of the cost of alternative energy sources to fossil fuels identified onshore wind as one of the cheapest options; OSW remained one of the most expensive.⁸⁴ Consideration of alternative renewable energy sources instead of OSW is, strangely, readily dismissed in the DEIS as “not technologically and commercially feasible at this time.”⁸⁵

⁸¹ See Gard Hopsdal Hansena and Markus Steen. Offshore oil and gas firms' involvement in offshore wind: Technological frames and undercurrents. *Environmental Innovation and Societal Transitions* 17 (2015) 1–14.

⁸² <https://www.eenews.net/greenwire/2021/02/19/stories/1063725503>.

⁸³ Snyder & Kaiser. 2009. Ecological and economic cost-benefit analysis of offshore wind energy. *Renewable Energy*, 34: 1567-1578.

⁸⁴ Gillingham & Stock. 2018. The Cost of Reducing Greenhouse Gas Emissions. *Journal of Economic Perspectives*—Volume 32, Number 4—Fall 2018—Pages 53–72 .

⁸⁵ SFWF DEIS, p. 2-14.

In fact, multiple technologies exist at commercial scales that may have relative benefits in comparison to OSW. Depending on site-specific conditions, technology that may be inappropriate in one area due to unreasonable conflicts or environmental conditions may be the most desirable in another. For example, in California, the State Groundwater Management Act required certain farmland to be fallowed during drought conditions, leading to a potential opportunity for location of agrivoltaic solar projects. We do not know if similar examples exist to meet renewable energy goals in New York; regardless, a comparison of relative costs and environmental impacts of alternative technologies should be included in the DEIS.

3. Greenhouse Gas/Climate Analysis

As stated above, the DEIS (and all public messaging associated with this and other proposed U.S. OSW projects) touts their benefits of minimizing the effects of climate change by replacing fossil fuel-based energy sources with a renewable energy source. This is a desirable goal--however, this DEIS contains no information on the net greenhouse gas (GHG) reductions. Any such analysis should include all stages of an OSW project, from surveying to decommissioning of turbines. This should be specific to the materials used for a project as the larger projects would require more source materials, potentially having a greater environmental impact, and different materials carry their own ramifications. A simple approach to calculate net carbon dioxide emissions from OSW projects has been developed and concluded that OSW had lower net carbon dioxide emissions compared to fossil fuels but it was higher than that onshore wind.⁸⁶

The carbon emissions of an OSW project itself may also be difficult to calculate without knowing how much of the grid will actually be in operation. Some available literature considered a lot of the carbon dioxide emissions associated with construction and operations to be mitigated by recycling of the turbines after decommissioning.⁸⁷ However, it is impossible to know whether components will be recycled after SFWF is decommissioned since no details are provided. Buried in one of the Appendices, the DEIS notes “The construction, operation, and decommissioning of offshore wind projects would produce GHG emissions (nearly all CO₂) that can contribute to climate change; however, these contributions would be minuscule compared to aggregate global emissions. CO₂ is relatively stable in the atmosphere and generally mixed uniformly throughout the troposphere and stratosphere. Hence the impact of GHG emissions does not depend upon the source location. Increasing energy production from offshore wind projects will likely decrease GHGs emissions by replacing energy from fossil fuels.” Yet provides no evidence for this or references for the public to investigate further to ensure this claim is accurate. No decision can be made from the analyses in this document.

It is important to understand both what amount of GHG would be offset by these projects, as well as what additional emissions may be produced. The DEIS acknowledges that the activities associated with renewable energy including offshore wind will contribute to carbon emissions but again, no information is provided on the scale of this contribution. It predicts up to 2,600 vessel trips over the life of the project, many of which could presumably come all the way from Europe or elsewhere. It also notes that turbines may be equipped with diesel generators as they “require power to keep out moisture, run lights, and direct the blades into the wind in the event of strong winds.” Resource-intensive activities associated with production of turbine components and batteries will have further impacts.

⁸⁶ Wang & Sun. 2012. Life cycle assessment of CO₂ emissions from wind power plants: Methodology and case studies. *Renewable Energy*. 43: 30-36.

⁸⁷ *Id.*; Thomson, C & Harrison, G 2015, Life Cycle Costs and Carbon Emissions of Offshore Wind Power. ClimateXChange. http://www.climateexchange.org.uk/files/4014/3325/2377/Main_Report_-_Life_Cycle_Costs_and_Carbon_Emissions_of_Offshore_Wind_Power.pdf.

A GHG analysis must also evaluate the effects of a loss of seafood availability. In a recent study comparing the GHG emissions of three sources of animal protein, wild-caught seafood had the lowest impact in each of the categories of GHG emissions, energy use, air pollution, and water pollution.⁸⁸ It is estimated that just two people with high meat consumption replacing that meat with fish would save the emissions equivalent of about driving 6,000 miles over the course of a year.⁸⁹ Carbon emissions associated with seafood production in countries with less stringent environmental regulations (i.e. essentially everywhere) are higher than those of domestic seafood; reduced availability or prohibitive pricing of products will drive consumers to replace sustainable U.S. seafood with higher-carbon proteins.

4. Supply Chain Impacts

Current infrastructure in the U.S. does not support the manufacturing or installation of offshore wind turbine components and thus energy development companies are poised to purchase them from foreign countries. For example, GE Renewable Energy, a main supplier of wind turbines and turbine parts, recently opened a new offshore wind factory and development center in China.⁹⁰ Construction and transportation of turbines, and their custom components, contribute to carbon emissions⁹¹ which must be taken into account when evaluating net carbon benefits.

A number of the materials consumed in the construction of a wind power plant contribute to carbon emissions, e.g. hard coal, iron, and crude oil. A clear example of the DEIS's omission of supply chain components is presented in Table 2.1.1-1, which lists the SFWF "project components" and footprint. This table includes no information about the materials of turbine components, batteries, or scour protection, nor the footprint of parts production including rare earth mining, vessel traffic, HDD staging and implementation, the cofferdam, and extraction for boulders or other materials used for protection. RODA urges developers to invest in manufacturing in the U.S. to not only promote a domestic workforce and ensure U.S. environmental standards are adhered to. Whether production is conducted domestically or abroad, BOEM must consider and include environmental impacts from the offshore wind supply chain.

Acknowledging the environmental impacts from supply chains of WEAs can result in changes in behavior, e.g. shorter transportation routes, to minimize emissions from transportation of turbines and components to offshore sites. Existing ports in seven different states (the furthest being Virginia) have been identified as locations for construction and staging. The use of far ranging ports will contribute to the carbon emissions of transportation; while denying the most impacted ports much of the economic benefit. There is the potential for economies of scale where larger turbines have lower carbon emissions associated with construction. Larger turbines should be used by all projects for this reason but the number of turbines should not be increased; this may have the added benefit of increasing safety for fishermen operating in or around a WEA.

The DEIS fails to consider economic, social, and environmental impacts to regional ports. BOEM does not provide justification for the following statement: "*Modifications of these ports specifically for the Project*

⁸⁸ Ray Hilborn et. al, The environmental cost of animal source foods, *Frontiers in Ecology and the Environment* Volume 16, Issue 6 (August 2018).

⁸⁹ Peter Scarborough et al., Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK, *Clim Change*. 2014; 125(2): 179–192.

⁹⁰ GE Renewable Energy, July 12, 2019, <https://www.ge.com/news/press-releases/ge-renewable-energy-open-new-offshore-wind-factory-and-development-center-china>.

⁹¹ Wang and Sun, 2012, *supra*.

are not anticipated.”⁹² It is unclear why no port redevelopment would be needed at any of the ports associated with this project since other projects have required heavy port investments. In many ports, facilities, docks and infrastructure serving the fishing industry are made available at below market rates. There is a finite amount of waterfront space available for water dependent uses. Are there local protections which will preserve and protect those facilities, docks and infrastructure - and the cultural heritage of working waterfronts? The port of New London, Connecticut has been undergoing redevelopment to accommodate the offshore wind industry at the expense of other businesses.⁹³ The socioeconomic impacts should analyze the number of jobs that could be lost as a result of these redevelopments adversely impacting other industries.

5. Extreme Weather Effects

Section 4.2.4 of the SFWF COP outlines the wind speed and wave height associated with storms and cyclones in the New England region, the results do not predict dominant wave or wind direction. Current turbine design based on the International Electrotechnical Commission, are not designed to withstand the extreme winds and directional wind shifts of hurricanes larger than Category 2, which can occur in the NE region. In fact, researchers found that turbines built to current standards that experience wind gusts from the eyewall and near-eyewall areas of Atlantic Category 5 hurricanes “would incur structural damage.”⁹⁴ The DEIS fails to sufficiently analyze how gusts and wind shifts during extreme weather events may damage turbines and negatively impact energy generation capacity.

6. Icing

Ice accumulation on the turbines is a known issue for wind energy areas in cold climates and is not considered in the DEIS. Icing should be analyzed for not only the safety risks associated with ice throws to mariners, but also for the environmental and energy contributions from any voluntary ice-remediation technologies. There are known methods for reducing ice buildup on turbine blades such as pre-treatment, coatings and heating, but these are not identified or analyzed. Currently BOEM does not require de-icing or pretreatment but analysis should consider impacts to power generation if Northeast winter storms could impact turbine capabilities.

Fishermen have repeatedly raised to BOEM and OSW developers the effect that ice buildup on turbine blades may have on safe passage of vessels around a turbine. Rime icing is a major concern for wind turbines,⁹⁵ and once temperatures rise, the ice is likely to dislodge from the blades. Layouts with minimal spacing between turbines increase the risk to transiting vessels from falling ice. The distance from the turbine that the ice can travel varies, dependent on whether the blades are active or locked down. Some of the additional factors affecting the distance travelled include the rotor diameter, hub height, size of the ice

⁹² SFWF DEIS, p. 2-3.

⁹³ Scott-Smith, Brian “New London State Pier Businesses Scramble To Relocate Following Vacate Order.” *WSHU Public Radio* 18 Nov. 2020. Available at: <https://www.wshu.org/post/new-london-state-pier-businesses-scramble-relocate-following-vacate-order#stream/0>.

⁹⁴ Worsnop, R. P., Lundquist, J. K., Bryan, G. H., Damiani, R., & Musial, W. (2017). Gusts and shear within hurricane eyewalls can exceed offshore wind turbine design standards. *Geophysical Research Letters*, 44(12), 6413-6420. Available at: agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017GL073537.

⁹⁵ Colin Morgan et al., *Assessment of Safety Risks Arising from Wind Turbine Icing*, EWEC-CONFERENCE (Oct. 1997), at 141-144.

fragment, rotor position, and wind speed.⁹⁶ Although those cited studies do not necessarily suggest icefall is likely to occur outside of the 500 m buffer zone, reports including one conducted by GE and referenced by the New York Times (but since deleted) in 2004 suggest ice throw from much smaller turbines can occur up to several hundred meters.⁹⁷ Indeed, the NYT article also highlights the need for BOEM to independently verify any claims regarding icing; it cites several studies that directly contradict information provided by the OSW trade association at the time.

Given the size and height of the turbines, in addition to unique geographic features in New England, ice accumulation and safety risks must be analyzed in the DEIS. If BOEM finds that safety or power risks are possible due to icing, it must require mitigation measures as a condition of any OSW permit it may issue.

7. Cabling

Insufficient details have been provided regarding a number of aspects of the cable system. Multiple important topics related to cabling are absent from the DEIS and must be evaluated both for their environmental impacts and consideration of a range of alternatives for mitigation (these are mostly addressed elsewhere in this document, but provided here for simplification):

- Details regarding the decommissioning of the cable transmission system;
- Details regarding the cable inspection program, which is supposed to be developed prior to project commissioning;⁹⁸
- Siting—and micrositing—of the SFEC cable route, which should require direct fisheries input.
- Location of inter-array cables.⁹⁹

8. Horizontal Directional Drilling

The process and impacts of horizontal directional drilling (HDD) should be explained in the DEIS. HDD is expected to be used close to shore and is likely to result in sediment disturbance and bentonite release. There is concern about the impacts to the seafloor from use of HDD Drilling Fluid. Fish stocks, and even fishing traps, can be highly affected by sediment movement. There, the extent to which drilling could undermine the seafloor and/or create additional sediment could have direct fisheries impacts. According to RODA members, bentonite, if released, could result in short-term burial and smothering of benthic epifauna and infauna, clog fish gills, and cause increased turbidity around the area of release. This begs the following questions: What are other potential impacts to wildlife and other living marine resources from releases of the HDD Drilling Fluid? Are there any recent studies on impacts to fish stocks and other living marine resources?

⁹⁶ Henry Seifert et al., Risk Analysis of Ice Throw from Wind Turbines, in Proceedings of BOREAS VI April 9-11 2004, Pyhatunturi, Finland (2004) (available at <http://web1.msue.msu.edu/cdnr/icethrowseifertb.pdf>).

⁹⁷ Kate Galbraith, Ice-Tossing Turbines: Myth or Hazard? New York Times (Dec. 9, 2008) <https://green.blogs.nytimes.com/2008/12/09/ice-tossing-turbines-myth-or-hazard/>.

⁹⁸ While the DEIS notes that “DWSF would develop a cable inspection program prior to Project commissioning” this affirmation is entirely unsatisfactory. This language mirrors that BOEM has provided regarding geological and geophysical surveys in its Environmental Assessments for lease issuance. In practice, once a developer acquires a lease, there is no opportunity for public input or consultation on design, seasonality, geographic area, or magnitude of such surveys; it is essentially an unregulated activity.

⁹⁹ A description of this appears to be included in the USACE notice but not the DEIS or COP. The DEIS’s citation to offshore conceptual drawings in the COP is incorrect—regardless, inter-array cable location is not provided. Note also that specific location of these cables was suggested as a desirable mitigation measure in the Crown Estate report.

9. Boulder Relocation

The DEIS includes almost no information regarding seabed engineering although it discloses deep in an appendix that construction of the offshore portion of the project would require “temporary” boulder relocation.¹⁰⁰ It is unclear how such an activity could be temporary and does not elaborate on how safety considerations of this activity would be addressed.

Also missing from the DEIS is information regarding the sourcing of the large amount of seabed materials that would be used for mattresses or other project activities. A full analysis must be included regarding its origin and the environmental impacts of associated dredging activities. Currently, the only information provided states that “[b]oulder relocation would be carefully executed to minimize damage to colonizing organisms. The disturbed boulder surfaces would recolonize over time, likely regaining full habitat function.”¹⁰¹ This statement is unsupported and appears logistically improbable.

b. Impacts Characterization

The magnitude of impacts underestimates the likely realized impacts, which does a disservice to the public trying to understand the net benefits of this renewable energy source. This issue applies across all impacts. BOEM must adequately analyze these impacts. To keep it short, we’ll focus on one example, impacts to benthic habitat, essential fish habitat (EFH), invertebrates, and finfish across alternatives. The no action alternative is expected to have negligible to moderate **adverse** “impacts if no other wind farms are authorized and negligible to moderate adverse effects if they are authorized.” This is blatantly wrong for multiple reasons. Firstly, the no action alternative would result in no change to current conditions and therefore would have no expected impact to benthic habitat. Secondly, this DEIS is rightly implying that the survey and preliminary construction activities are having adverse impacts to benthic habitat, which must be disclosed to the public, resulting in the moderate adverse effects associated with the no action alternative. Thirdly, the impact ranking provided for the no action alternative does not cover not building the SFWF; it encompasses impacts of construction activities of other (hypothetical and/or future) WEAs in the area (and the area is not clearly defined). Therefore, it is incorrect to state there will be adverse moderate impacts if BOEM selected the No Action alternative. The No Action alternative would have no negative impact on benthic habitat if construction of a WEA does not occur. This is because no turbines will need to be pile-driven into the seabed and benthic habitat converted from soft sediment to hard substrate from turbine associated protection methods.

The proposed action impacts assessment does not analyze short-term and long-term independently. The DEIS correctly points out that short-term impacts will be adverse, continuing with our example of benthic habitat, resulting from over 24 hours of pile driving turbines into the seabed causing the suspension of sediments in the water column, mortality of invertebrates and other species, accidental leakage of oils etc. from construction vessels. The DEIS wrongly concludes that the proposed action will have positive long-term impacts on benthic habitat. The proposed action will modify local benthic habitat, converting areas of sandy bottom to hard structures, in the form of scour protection around turbines and cable protection mats. This could have long-term impacts on local ecological communities, which have not been analyzed. By definition, changing the benthic habitat from its natural state to a modified one in order to accommodate turbines results in long-term major adverse impacts. A plan for assessing these impacts should also be the responsibility of the developer.

¹⁰⁰ SFWF DEIS, p. H-27.

¹⁰¹ SFWF DEIS, p. 3-19.

The impacts also do not vary across the valued ecosystem components (VECs) between the no action and proposed action alternatives. As explained above, this defies logic. Again, focusing on the benthic habitat VEC, it doesn't make sense that constructing and maintaining a WEA would have similar impacts to the sea bed as not constructing one.

The DEIS does not explain why there are no long-term moderate to major benefits across the VECs from the proposed alternative. This is especially surprising for air quality. The DEIS concludes that there will be temporary negative impacts to air quality but cumulative impacts would range from minor adverse to minor beneficial. OSW has been sold to the public as a key energy source to mitigate climate change, yet, the DEIS doesn't include a climate analysis outlining for the public the reduction in greenhouse gases this WEA would allow. This is a major gap in the impacts analysis, which prevents the public from properly understanding the tradeoffs of this project. The public is left to guess what benefit, if any, this WEA, and cumulatively with the other planned WEAs, would have on greenhouse gases at the expense of local ecosystems, as discussed above. If we use air quality as a proxy for greenhouse gases, the construction of approximately 2,000 turbines along the east coast could cumulatively have minor beneficial impacts. We then must ask, why are we risking harm and modifying marine ecosystems for little benefit?

c. Affected Environment

The "affected environment" is described differently throughout the DEIS, to the extent that it cannot be understood by the public. Of primary concern in describing the affected environment related to fisheries, and supporting analysis of the DEIS alternative, are the defective definitions of the area of impact.

The DEIS describes an "area of direct effects" to fisheries that is cyclically defined as including "the footprint of the SFWF and offshore SFEC and surrounding areas that could be measurably affected by Project construction and installation, O&M, and conceptual decommissioning." It states that short term underwater noise would create the largest possible area of impacts, so defines the area of direct effects as that where "[s]ignificant noise effects based on sound attenuation modeling could extend," or 8 miles from each turbine foundation, 0.5 mile from the SFEC sea-to-shore transition, and 0.1 mile from vessels burying the offshore SFEC.¹⁰² No criteria is provided for the threshold of what constitutes a "significant noise effect," what species or stock this refers to, or why the environment where effects that are adjudged non-significant occur may not meet the definition of "affected," particularly if these effects may have significant cumulative impacts.

Conflating significance with directness here is sloppy and capricious as they have profoundly different meanings under NEPA. "Significance" carries a specific definition that includes both context and intensity.¹⁰³ "Indirect effects" are those which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.¹⁰⁴ The two concepts are not mutually descriptive; an effect can be indirect and significant or even direct and insignificant. The very description of the affected environment is therefore deficient for these two separate, but related, reasons: (1) it does not provide sufficient detail to evaluate whether the described geographic area is the appropriate one to meet the definition of significant effects; and (2) it does not include anywhere a description of the area that will experience indirect effects from the proposed action and alternatives.

¹⁰² This directly contradicts a statement elsewhere in the DEIS estimating that underwater noise from construction of reasonably foreseeable OSW construction "would result in short-term injury or behavioral effects on finfish over a cumulative area of up to 7,000 square miles."

¹⁰³ 40 C.F.R. § 1508.27.

¹⁰⁴ 40 C.F.R. § 1508.8(b).

In several portions of the document, the description of impacts to fisheries and protected resources uses an entirely different geographic area without specifying the criteria. This appears to be acknowledged in the affected environment description: “The larger geographic analysis area used as part of some analyses is discussed in Appendix E.” However, Appendix E only describes the cumulative activities scenario, and that suffers from similarly casual treatment.

The geographic analysis area in the cumulative activities scenario for benthic habitat, essential fish habitat (EFH), invertebrates, and finfish is described as including the Northeast Large Marine Shelf Ecosystem; for benthic habitat only it includes a radius of 10 miles surrounding the MA/RI WEAs and the SFEC. The provided justification that this scale “would account for some transport of water masses and for benthic invertebrate larval transport due to ocean currents,” even though “sediment transport beyond 10 miles (16.1 km) is possible” and “transport related to proposed Project activities would likely to be on a smaller spatial scale” defies comprehension and is demonstrably arbitrary. Additionally, the DEIS states that “BOEM and the applicant are currently working with NOAA to refine this baseline assessment as part of the EFH consultation. This information and analysis will be detailed in the EFH report and summarized in the FEIS.” A description of baseline conditions is the heart of NEPA’s requirement for the affected environment section, against which impacts of alternatives can be compared. As with other statements referenced in these comments, deferring this elemental information to the FEIS moots the entire documents validity.

d. Fisheries Data

It is unclear why the DEIS restricts the fisheries socioeconomic analysis to 2008-2018; calendar year 2019 data should have had its quality control completed and be available. VTR data extends back to 1996, while VMS data only extends back to 2006. Fishermen are only required to report the statistical area they were fishing in on their VTRs; a new page for the VTR is required if the vessel moves to a new chart area. Statistical areas are relatively large areas, however, the data contained in them should not be dismissed because the fishery specific activity can’t be displayed on a smaller spatial scale matching individual OSW projects. The entire east coast is being built out with WEAs and that larger scale may match more appropriately with VTRs. The added benefit being that the longer time series better captures natural variations in distributions of fish stocks that is missed in shorter data sets. It is unclear why the analyses were further restricted to shorter time periods, e.g. the for-hire data only extends to 2014 and Table 3.5.1-12 restricts commercial fisheries data to between 2008-2012. Perhaps, that second example contains a typo as the text appears to reference data from 2008-2018.

A glaring oversight in the analysis to commercial fisheries is the omission of landings data. The current analysis skews the conclusions of impacts to focus on high-revenue fisheries. There are other fisheries that have high volume landings but a low price per pound resulting in lower revenues by comparison. Monkfish and the Northeast Skate Complex fishery management plans (FMPs) are, overall, high volume and lower revenue fisheries. However, these species comprise the entirety of many individual fishing businesses. The most recent publicly available landings data on monkfish show landings in 2018 to be 11,736,000 lbs and associated revenues were \$15,452,000.¹⁰⁵ An important caveat when analyzing fisheries data in U.S. waters is the stringent fisheries management system, which sets an Acceptable Biological Catch (ABC) for each managed species and restricts effort to prevent exceeding the ABC. Both the monkfish and skate FMPs use effort controls, e.g. trip limits, to limit landings.

¹⁰⁵ New England Fishery Management Council (NEFMC). 2020. Framework Adjustment 12 to the Monkfish Fishery Management Plan including a Supplemental Information Report, Regulatory Impact Review and Initial Regulatory Flexibility Analysis. Available from: New England Fishery Management Council, 50 Water Street, Newburyport, MA 01950, or online at: <http://www.nefmc.org>.

e. Fisheries Research

1. NMFS Survey Inaccessibility

Offshore wind development will prevent the Northeast Fisheries Science Center (NEFSC) from completing its annual surveys in its current form. The NEFSC trawl survey has been in operation since 1963 and has become a cornerstone of fisheries management¹⁰⁶ Long-running surveys provide valuable information that inform stock assessments. The NEFSC trawl survey has been conducted using the NOAA Ship Henry B. Bigelow since 2009 after calibration in 2008. The Bigelow measures 208 ft in length and 49 ft in width (beam). The targeted door spread of the trawl gear is 13 m. Specifications of all the gear components are publicly available including the amount of wire is used for each depth.¹⁰⁷ The size of the vessel makes it impossible for the Bigelow to operate within a WEA and complete its survey. The sampling protocol is a random stratified design; incomplete strata directly impact the ability to estimate population size proxies. Many of these surveys travel well-defined transects and the stock assessment models are based on long-term datasets. To the extent transects or other data points become unavailable due to incompatibility with OSW, the foundation of our fisheries management is at risk. For example, the Northeast Skate Complex stock assessment is completely dependent on the NEFSC trawl survey. The assessment was affected by interruptions to the survey in recent years, forcing the NEFMC Plan Development Team to explore methodologies, e.g. smoothing, that would allow survey indices to be calculated.¹⁰⁸ No sampling in the Southern New England and Mid-Atlantic strata resulted in no survey indices for rosette and clearnose skates; there is no methodology that will fix missing data from unsampled strata.

The DEIS concludes that the SFWF project will have negligible to moderate impacts on scientific research and surveys. This differs again from the unfinished VW SEIS where the impacts were considered to be major. Impacts to the surveys directly impacts fishermen by increasing uncertainty in stock assessments, which typically results in reduced quotas. For example, the clam stock assessment does not include areas that are not surveyed; the region east of Nantucket is not surveyed and therefore is not included in the assessment despite clams being caught there commercially in the past. The economic impact of lost fishing grounds is exacerbated by the uncertainty created in stock assessments resulting in reduced catch limits. The National Standard 1 guidelines require the acceptable biological catch to account for any scientific uncertainty in the estimate of the overfishing limit.¹⁰⁹ Scientific uncertainty is directly related to information regarding the status of the stock, e.g. stock assessments, which may be based solely on federal surveys depending on the stock. This represents a major unknown for the fishing industry because the magnitude of impacts will vary by species. These concerns have been widely cited, including through comments from NMFS.

¹⁰⁶ PJ Politis, JK Galbraith, P Kostovick, RW Brown. 2014. Northeast Fisheries Science Center bottom trawl survey protocols for the NOAA Ship Henry B. Bigelow. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 14-06; 138 p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/publications/>.

¹⁰⁷ *Id.*

¹⁰⁸ NEFMC. 2019. Memorandum from Skate PDT to Science and Statistical Committee RE: NE Skate Complex ABCs for FY2020 - 2021, dated August 14, 2019. Available at: https://s3.amazonaws.com/nefmc.org/C1_PDT-Memo-to-SSC-RE-ABC.pdf.

¹⁰⁹ 50 C.F.R. § 600.310(f)(ii).

2. Project Monitoring Plans

Fisheries monitoring will be insufficient for the SFWF project and other near-term offshore development if approached on a project-by-project basis. OSW developers are required to develop fisheries monitoring plans; this is essential, however, their utility will be limited without appropriate study design and coordination. They are likely to have less than two years of baseline data making it difficult to understand true impacts to stocks with high interannual variability. It is imperative to be able to detect any changes in abundance and distribution of fish and invertebrate species resulting from OSW development. Ørsted has made recent improvements to its direct work with the fishing industry, including several webinars with federal, state, and industry experts to gain feedback on its draft fisheries monitoring plans. It has also hired a full-time Ph.D. fisheries scientist to further its work in this area and participated in the Interim Fisheries Monitoring Working Group organized by the Responsible Offshore Science Alliance (ROSA). RODA supports this proactive approach that Ørsted has taken to incorporate strong fisheries science upfront.

With the revocation of the “One Federal Decision” policy, NOAA Fisheries should be authorized to formally approve the fisheries monitoring plans, as they are the national agency of fisheries experts. Currently, there are no rules for reviewing the monitoring plans, which has led to ad hoc reviews and no requirements for inclusion of any recommendations. RODA encourages Ørsted to incorporate the revisions proposed by NOAA Fisheries and Massachusetts Division of Marine Fisheries to its fisheries monitoring plan that would improve the utility and better our understanding of the impacts OSW developments have in U.S. waters.

BOEM must require monitoring and research to extend from three to five years prior to construction (or as soon as there is reason to believe an area may be considered for OSW development) until three to five years after decommissioning. Too little is currently known regarding the impacts of OSW developments on local ecosystems, resulting in these long-term experiments. The Fisheries Communication Plan states that “DWSF is committed to collaborative science with the commercial and recreational fishing industries pre-, during, and post-construction.” This commitment should extend for more than two years to collect sufficient data for analysis of impacts. Since research wasn’t designed early enough in the leasing process it is unclear that standard scientific methods like control areas can be accommodated in the MA/RI WEAs. If control areas are required for sound study design, BOEM must consider that in its NEPA review.

Additional funding must be allocated to federal agencies and research institutions in order to be able to address these uncertainties in order to supplement the research funds spent by developers. Priority for funding should be given to fisheries-related research, ideally through existing cooperative research programs, e.g. NMFS wind team, the regional fishery management councils and ROSA. Fishermen and developers have come together as part of ROSA to increase mutual understanding and this cooperative effort should be supported; research that directly involves fishermen would greatly benefit from fishermen’s expertise and would also have a higher acceptance from the fishing industry as a whole.

*f. **Biological Impacts***

1. Impact Producing Factors

*i. **Electromagnetic Fields, Heat, and Noise***

The DEIS provides information regarding the size and scope of OSW projects under consideration, including up to 5,779 miles of cable that may be added in the geographic analysis area under the No Action

alternative alone.¹¹⁰ Despite this huge amount of cable proposed to be introduced to the environment, noise associated with large increase in vessel traffic, pile driving, and O&M, and the known potential for these impact factors to affect multiple fishery stocks, the DEIS contains very little information about these impacts. Further species-specific and cumulative analyses should be conducted in order to understand how all components and phases of OSW projects would affect the organisms in the project area. Known information regarding these impacts to fisheries is being assessed in the Synthesis of the Science project RODA is conducting in partnership with BOEM, NMFS, ROSA, and others, and should be included in project considerations.

ii. Light

The description of how light may impact finfish and invertebrates is yet another example of an uncorroborated, unsupported, and misleading description of a potentially highly detrimental impact to biological resources. The paragraph on light, under the No Action alternative states in its entirety:

Artificial light can attract finfish and invertebrates and can disrupt their natural cyclical activity, e.g., spawning. Offshore wind development would result in additional temporary artificial light from construction vessels and long-term artificial light from an additional 2,050 offshore WTGs and OSS foundations. These lighting sources would not be downward directed toward the water surface. Construction vessels would also follow BOEM guidelines for lighting. Therefore, the amount of light penetrating the sea surface would be minimal and would not impact finfish, invertebrates, or EFH. Artificial lighting would not be expected to impact benthic habitat, due to depth of water where artificial light would be used.¹¹¹

This analysis is problematic for several obvious reasons. It provides a wholly inadequate description of the known negative impacts of artificial light on marine organisms, which are numerous. For instance, artificially illuminating marine organisms at night can alter the structure of marine ecosystems and trophic interactions between marine organisms.¹¹² The brief section in this DEIS on light presents an utterly vague and generic description of what type of light(s), what quantity and levels of light and the estimated location of lights will be produced on each turbine or other offshore structure. This information should at least be summarized in the DEIS, as these specifics are necessary in order to properly assess biological impacts.

At a minimum, the DEIS must answer the following specific questions: (1) how much light will be emitted, to what distance from each turbine, and to what depths; and (2) what are the predicted impacts from this? It is not sufficient or correct to simply claim, without any resources to support such a claim, that light would be “minimal” and therefore would not impact finfish, invertebrates, or EFH.

iii. G&G Surveys

Impacts from geophysical and geotechnical (G&G) survey methods are poorly understood, but there is growing anecdotal evidence that these efforts may be negatively impacting marine resources. RODA has heard from several fishermen operating in various fisheries that certain species that are expected to be found in an area, following G&G surveys work, are no longer present. Pot fishermen have reported mortality in whelk/conch in pots after G&G surveys were conducted in the same area as the pots were set. Currently,

¹¹⁰ SFWF DEIS p. 3-10.

¹¹¹ SFWF DEIS, p. 3-12.

¹¹² T.W. Davies, D. McKee, J. Fishwick, S. Today, & T. Smyth. 2020. Biologically important artificial light at night on the seafloor. *Scientific Reports* 10, 12545.

few studies have researched this directly, but individual reports from fishermen with a deep understanding of the ocean they operate in, should not be dismissed as hearsay. The only study RODA is aware of found that seismic testing used for geophysical surveying disrupted free-ranging Atlantic cod activity, which could “affect energy budgets and... have population-level consequences.”¹¹³ At a minimum, BOEM should acknowledge the potential impacts from G&G surveys to biological resources, and invest in improving our basic understanding of these *already* on-going efforts.

2. Whales

RODA has found that information describing Environmental Consequences for marine mammals (Section 3.4.4.2) as well as Activities and Associated Impact Producing Factors (IPFs) for Marine Mammals (Table 3.5-1) and associated conclusions are both inaccurate and highly misleading. One fundamental problem, as discussed earlier in this comment letter, is that BOEM has taken a big leap in presupposing that the No Action alternative will include 2,050 individual turbines, thereby rendering the installation and operation of 15 ‘additional’ turbines proposed by this project to have no net increase in impacts. Beyond this fundamental problem with the misleading and un-clear nature of the Comparison of Impacts by Alternative, there are several points regarding marine mammals that need to be addressed and/or clarified.

The DEIS has failed to properly assess the impacts to the five endangered and one threatened marine mammal species known to occur in the region. In this comment, we focus on the critically endangered North Atlantic right whale as an example of a resource that is inadequately assessed. The DEIS states that “of these six marine mammals listed under the ESA, critical habitat has been designated for only North Atlantic right whale (NARW) (*Eubalaena glacialis*), but none is located within the analysis area”. Though it may be true that designated critical habitat (i.e., lines drawn on a chart) for NARWs does not occur in the “Area of Direct Effects”, it is *only* 100 miles east of the Project. It is inaccurate to posit that these waters are therefore unimportant to the NARW, especially since the presence of NARWs south of Martha’s Vineyard and Nantucket, which is where the Proposed Project is to be located, has been documented as increasing since at least 2016.¹¹⁴ Importantly, the critically endangered NARW relies on coastal New England waters for feeding, growth, reproduction, and survival,¹¹⁵ whether or not all of these waters have been officially classified as critical habitat. Studies have documented increased use of Cape Cod Bay¹¹⁶ and late winter use of the region south of Martha’s Vineyard and Nantucket Islands-- precisely where the SFWF Project is being proposed--was recently described.¹¹⁷ NARWs must locate and exploit extremely dense patches of zooplankton, specifically, high concentrations of a lipid-rich copepod (*Calanous finmarchicus*), to feed efficiently, and these dense patches are likely a primary characteristic of the spring,

¹¹³ van der Knaap et al., Effects of a seismic survey on movement of free-ranging Atlantic cod, *Current Biology* (2021), <https://doi.org/10.1016/j.cub.2021.01.050>

¹¹⁴ Roberts-Duke, J., Etre-IEC, N. 2019. Decision Support Tool presented to the Atlantic Large Whale Take Reduction Team April 23, 2019. https://archive.fisheries.noaa.gov/garfo/protected/whaletrp/trt/meetings/April%202019/Meeting%20Materials/overview_of_relative_risk_reduction_decision_support_tool__04_23_2018.pdf

¹¹⁵ Pendleton, D., Sullivan, P., Brown, M., Cole, T.V., Good, C., Mayo, C., Monger., Phillips, S., Record, N., Pershing, A. 2012. Weekly predictions of North Atlantic right whale *Eubalaena glacialis* habitat reveal influence of prey abundance and seasonality of habitat preferences, Vol. 18: 147–161, p. 155.

¹¹⁶ Mayo, C. A., Ganley, L., Hudak, C. A., Brault, S., Marx, M. K., Burke, E., & Brown, M. W. (2018). Distribution, demography, and behavior of North Atlantic right whales (*Eubalaena glacialis*) in Cape Cod Bay, Massachusetts, 1998–2013. *Marine Mammal Science*, 34(4), 979-996.

¹¹⁷ Leiter et al. 2017 in 2020 NOAA Fisheries Stock Assessment. Available at: https://media.fisheries.noaa.gov/dam-migration/2019_sars_atlantic_northatlanticrightwhale.pdf.

summer, and fall right whale habitats within the Area. Given the high likelihood that NARWs will occur within and adjacent to the Project Area, it is crucial that potential impacts to whales be properly characterized in the final EIS. Scientists agree that the loss of even one more breeding female whale would be catastrophic to the population.

BOEM has dismissed the potential importance of the SFWF to NARWs and minimized the potentially devastating effects to the population that could occur due to offshore wind construction and operation activities and associated Impact Producing Factors (IPFs). The first concern is the high amount of increased vessel traffic- up to 2,600 vessels throughout the life of the project. This would greatly increase the risk of ship strike to the endangered NARW. Threats to the NARW population include vessel strikes, habitat degradation, ocean noise, changes in distribution and availability of prey, entanglement in fishing gear, and their small population size. NOAA Fisheries has stated that slowing down vessel traffic and reducing ocean noise, as well as reducing risks of entanglements are key to regulation and management plans.

Additionally, associated increases in vessel noise could contribute to the suite of ongoing stressors impacting the population. Noise has been found to interfere with right whale communication and increase their stress levels. In turn, “females that undergo energetic stress from reproduction may be more susceptible than males to dying from chronic injuries such as those from entanglement or vessel strikes.”¹¹⁸ Noise from human activities, such as that which would occur with the wind energy installation and operation of the proposed project, can disrupt normal behavior of right whales and may further reduce their ability to identify physical surroundings, find food, navigate, and find mates. However, the impacts of noise are minimized within the DEIS, especially that of increases in the amount of vessel noise. One glaring example of insufficient analysis by BOEM is that the section describing impacts of noise on the NARW relies heavily on a single 2009 study,¹¹⁹ that was done on a completely different classification of whales. This study talks about odontocetes (that is, toothed whales including bottlenose dolphins and pilot whales), and the NARW is a mysticete (a baleen whale, with completely different feeding, migration, physiology, behavior response, etc.). The DEIS only cites this study,¹²⁰ which is largely irrelevant to the NARW. Additionally, another false justification is made for minimal impacts: BOEM states that “*brief [negative/avoidance] responses of individual [whales] to passing vessels would be unlikely given the patchy distribution of marine mammals, and no stock or population level effects would be expected.*”¹²¹ This is overtly contrary to what is known about the NARW population and use of the proposed project area.

It is imperative that vessel and noise impacts from offshore wind energy development NOT be considered in isolation, that is, at the project level alone, particularly when it comes to impacts to whales, as they are highly migratory and rely on resources and habitat along the U.S. eastern seaboard, in which numerous wind energy areas have already been leased and more will likely be leased in the future. Again, here is where an impacts characterization has been flipped on its head; by saying that the No Action alternative will have the same impacts as the Proposed Project based on the assumption that thousands of turbines are inevitable and then using that to justify poor practices for the assessment of the development of the SFWF Project.

¹¹⁸ See <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>

¹¹⁹ Jensen, J.H., L. Bejder, M. Wahlberg, N. Aguilar Solo, M. Johnson, and P.T. Madsen. 2009. Vessel noise effects on delphinid communication. *Marine Ecology Progress Series* 395:161–175.

¹²⁰ SFWF DEIS, p. E3-17.

¹²¹ SFWF DEIS, p. E3-17.

G&G survey noise impacts are also a primary concern. Without mitigation, certain types of G&G surveys could result in long-term, high-intensity impacts on marine mammals. The DEIS says that these effects “*may include behavioral avoidance of the ensonified area and increased stress; temporary loss of hearing sensitivity; and permanent auditory injury depending on the type of sound source, distance from the source, and duration of exposure [to marine mammals].*”¹²² However, once again, there is a poor justification for a lack of impacts. It is not a given that mitigation measures won’t result in adverse impacts to marine mammals, and BOEM should not treat them as matter of fact as stated in the DEIS. It is presumptive to almost guarantee that not a single right whale will be harmed during surveys, which is realistically not a claim that can or should be made.

In Table 2.3.1-1, Comparison of Impacts by Alternative, the Impacts to Marine Mammals under the No Action Alternative needs clarification. It states: “*...Negligible to moderate adverse effects if no other wind farms are authorized and negligible to moderate effects if they are authorized.*” First, ‘negligible to moderate’ encompasses 3 out of 4 available categories within the range, and is therefore not informative in a practical sense. Second, how can adverse effects to marine mammals be said to be within the same range whether or not any future wind farms are authorized, especially given the known, if poorly understood, potentially long-term negative impacts to whales from vessel traffic and noise? This type of analytical inconsistency or discrepancy is prevalent throughout the DEIS.

Regarding marine mammals, BOEM states: “*Under the No Action alternative, construction of 2,050 offshore structures would generate short-term and intermittent impulsive underwater noise with the potential to impact marine mammals. These effects would be limited to specific construction windows beginning in 2022 and continuing through 2030.*” This claim, that effects would be limited to specific construction windows, is not informed by the most recent science, and is therefore inaccurate. RODA recommends that BOEM consult the paper “The Effects of Ship Noise on Marine Mammals- A Review” by Erbe et al. 2019.¹²³ They provide an overview of what is known to date, and show that studies have been patchy not only in terms of their coverage of species and vessel types, but also in the types of impacts investigated. The documented effects include behavioral and acoustic responses, auditory masking, and stress.

Since 2017 alone, 32 NARW have died and 14 have been seriously injured.¹²⁴ Installation and operation of the South Fork Wind Farm will undoubtedly increase the amount of vessel traffic and ocean noise (e.g. from pile-driving during installation and vibrational noise from turbines during ongoing operation). The various mitigation measures presented by BOEM do not adequately address concerns regarding whales. For example, the Mitigation or Monitoring Measures proposed in Table G-2 that relate to marine mammals need clarification and an explanation of what supporting data was used, i.e., how they were informed. Again, saying that impacts could still be “negligible to moderate” even with mitigation should raise alarm. The actions should not be allowed to be considered mitigatory if they are still resulting in unacceptable potential population level impacts to numerous species.

Construction timing windows can be an effective tool for mitigation, that is, avoiding doing any work during critical times when the population of concern is present or likely to be within the area. However, the time-of-year restrictions to protect endangered marine mammals are confusing and inconsistent in the

¹²² SFWF DEIS, p. 3-46.

¹²³ Erbe, C., Marley, S. A., Schoeman, R. P., Smith, J. N., Trigg, L. E., & Embling, C. B. (2019). The effects of ship noise on marine mammals—a review. *Frontiers in Marine Science*, 6, 606.).

¹²⁴ See <https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>.

Mitigation and Monitoring sections. BOEM needs to explain how these measures were decided and/or provide justification for their selection.

Subsequent negative impacts to local fishermen and coastal communities as a result of a potentially adverse impact to NARWs (e.g. vessel strike resulting in death or severe injury) are not mentioned or evaluated, and should be included in a comprehensive analysis. Both the NARW and Fin whale are known to be present within the proposed SFWF Project Area throughout the year, with the NARW presence classified as Common and the Fin whale classified as Regular in the DEIS, and numbers are particularly high from late winter through early fall. The lack of an adequate analysis of individual and cumulative impacts to these protected whale species is concerning, given that:

- The injury or death of a single North Atlantic right whale could have population-level impacts.
- The fishing industry, specifically Massachusetts lobstermen and gillnetters, are already highly restricted in their ability to harvest due to NARW protections. For instance, all MA state waters are closed to lobster gear from Feb. 1 - May 15th, with the exemption of waters south and southwest of the Cape.
- Not only would serious injury or death of a single NARW be devastating to the whale population, it would result in highly negative impacts to fishermen through management action required under the Marine Mammal Protection Act.

3. Cod

BOEM should not lease areas for OSW development in areas identified as essential for a key life stage for any species or segment of a population. For example, portions of Cox Ledge are proposed to be developed as part of the SFWF project. Atlantic cod has distinct spawning populations, one of which occurs south of Cape Cod including Cox Ledge.¹²⁵ Spawning in this area occurs from December to April.¹²⁶ OSW projects can affect spawning cod in multiple ways. Firstly, Atlantic cod have a specific spawning behavior called lekking mating system.¹²⁷ Within the spawning aggregation, the males create small territories and perform mating behaviors to attract females, which requires open space. Secondly, sound plays a role in the spawning behavior of Atlantic cod. They use grunts to communicate during spawning. Research has shown that background noise, including vessel traffic, can mask the grunts leading to a potential mismatch in timing or location of the spawning aggregation.¹²⁸ Research is needed to determine the level of noise produced, whether it is sustained or intermittent, what causes any increases in noise production, and its impact on spawning populations reliant on acoustic communications for successful spawning.

As referenced previously, the environmental protection measures proposed by SFWF are listed in Table G-1 of the DEIS. One of these states that “[s]ite-specific benthic habitat assessments and Atlantic cod spawning surveys informed siting of the SFWF and SFEC offshore.” There is no documentation in the DEIS whatsoever to understand or evaluate this claim. At a minimum, a document must be provided explaining what data that went into the assessments and how it impacted siting decisions. Moreover, this

¹²⁵ Kovach, A.I, T.S. Breton, D.L. Berlinsky, L. Maceda, & I. Wirgin. 2010. Fine-scale spatial and temporal genetic structure of Atlantic cod off the Atlantic coast of the USA. *Marine Ecology Progress Series*. 410: 177 – 195.

¹²⁶ Zemeckis, D.R., D. Martins, L.A. Kerr, S.X. Cadrin. 2014. Stock identification of Atlantic cod (*Gadus morhua*) in US waters: an interdisciplinary approach. *ICES Journal of Marine Science*. 71(6): 1490-1506.

¹²⁷ Zemeckis, D.R., M.J. Dean, & S.X. Cadrin. 2014. Spawning Dynamics and Associated Management Implications for Atlantic Cod. *North American Journal of Fisheries Management* 34:424–442.

¹²⁸ Stanley, J.A., S.M. Van Parijs, & L.T. Hatch. 2017. Underwater sound from vessel traffic reduces the effective communication range in Atlantic cod and haddock. *Scientific Reports*. 7, 14633.

seems facially impossible, as Ørsted’s cod studies are reported to have started in 2019¹²⁹ and SFWF’s COP was submitted on June 6, 2018

4. *Invasive Species*

The introduction and/or growth of non-native marine species into new regions where they can have adverse effects on local ecosystems is considered to be a serious threat to ocean biodiversity. To date, OSW structures are a new and unquantified vector for the potential spread of invasive species, particularly given the large number of vessels predicted to enter the U.S. EEZ associated with their development. Invasive species are first mentioned in the DEIS in relation to vessel introduction, that is, the release of invasive species during discharge of ballast and bilge water from vessels:

*Another potential impact related to vessels and vessel transit includes the release of invasive species during discharge of ballast and bilge water.*¹³⁰

The DEIS provides a very inadequate justification for how this problem will be avoided. In short, the argument is made that USCG regulations will “reduce the likelihood” of this occurring, which is not true historically. The justification is as follows:

However, vessels are required to adhere to existing state and federal regulations related to ballast and bilge water discharge, including USCG ballast discharge regulations (33 CFR 151.2025) and EPA National Pollutant Discharge Elimination System Vessel General Permit standards, which would reduce the likelihood of discharge of ballast or bilge water contaminated with nonnative species and those nonnative species becoming established as a result of offshore energy related vessel activities.

Arguing or claiming that just because vessels are required to adhere to regulations, that alone will reduce the likelihood of introducing more invasive species, is both false and not a sufficient analysis of potential risks. International vessel traffic increases resulting from the SFWF project need to be quantified in order to better assess potential risks of introducing invasive species, which could result in negative consequences to the local ecology and potentially alter fish populations on the local level. Invasive species should not be dismissed or not considered as a serious potential problem, as they are in this DEIS.

In addition to increases in foreign vessels, the “presence of structures” is a potential vector for enabling growth of invasive species and subsequent shifts in biological communities. The presence of structures is discussed throughout, including in the Marine Mammal Associated IPFs and Sub-IPFs table. The draft EIS and many other reports often grossly oversimplify and misrepresent the concept of an ‘artificial reef effect’. With regard to the impact on habitat conversion and prey aggregation, the DEIS states that:

The reef effect is usually considered a beneficial impact, associated with higher densities and biomass of fish and decapod crustaceans (Taormina et al. 2018), providing a potential increase in available forage items and shelter for seals and small odontocetes compared to the surrounding soft-bottoms.

¹²⁹ See <https://www.fisheries.noaa.gov/feature-story/scientists-collecting-data-commercial-fish-species-wind-energy-lease-areas-0>.

¹³⁰ SFWF DEIS, p. 3-11.

This oversimplifies the complexities and nuances of how introduced hard substrate may impact ecological communities; the result is not always beneficial. Moreover, what ‘beneficial’ means in the above paragraph is not defined. If the public is being fed the narrative that the artificial reef effect is so wonderful, these beneficial impacts need to be better defined and addressed out front that the Northwestern Atlantic has not seen large scale wind project development, and thus we simply do not know what the ecological impacts will be. This should not be understated, given the severe negative impacts such as decreases in biodiversity and water quality that can result from increases in invasive species.

A few studies in Europe have already documented negative impacts associated with new and/or invasive-dominated fouling assemblages. For example, Wilhelmsson and Malm (2008) show further evidence that human-built structures support fouling assemblages that are significantly different from natural hard substrata.¹³¹ Additionally, they call for “evaluations of the risk of the wind turbine parks to act as stepping stones for invasive species, [which is] relevant to include in further studies and environmental impact assessments”. The potential impacts of new invasive species on the ecology of coastal waters should be a major concern of offshore wind developers. There is evidence that wind turbine structures may act as stepping stones for non-native species.¹³² For example, offshore wind projects in the Southern North Sea were rapidly colonized by non-indigenous species, particularly in the intertidal region.¹³³ Not all surfaces are natural rock equivalents, in terms of their ecological impacts, and thus the oft-mentioned artificial reef effect must be more accurately discussed, that is, include an analysis of potential negative consequences, in the final EIS.

Importantly, the long-term and time-dependent impact of introduced surfaces (turbines, scour protection, and other structures associated with the SFWF offshore wind project needs to be prioritized. BOEM should ensure that the developer is responsible for carrying out studies that assess invasive species presence within the wind energy area, preferably designed by experts in this field of study. These studies should also analyze cascading ecological effects, especially as they relate to important local fisheries.

5. Horseshoe Crabs

The SFWF DEIS omits crucial information about the Atlantic horseshoe crab (*Limulus polyphemus*), a vulnerable species native to the East Coast of the United States and known to be present within the New

¹³¹ Wilhelmsson, D. and Malm, T. (2008) Fouling Assemblages on Offshore Wind Power Plants and Adjacent Substrata. *Estuarine, Coastal and Shelf Science*, 79, 459-466.

<http://dx.doi.org/10.1016/j.ecss.2008.04.020>.

¹³² Causon, P. D., & Gill, A. B. (2018). Linking ecosystem services with epibenthic biodiversity change following installation of offshore wind farms. *Environmental Science & Policy*, 89, 340-347; De Mesel, I., Kerckhof, F., Norro, A., Rumes, B., & Degraer, S. (2015). Succession and seasonal dynamics of the epifauna community on offshore wind farm foundations and their role as stepping stones for non-indigenous species. *Hydrobiologia*, 756(1), 37-50.; Gill, A. B. (2005). Offshore renewable energy: ecological implications of generating electricity in the coastal zone. *Journal of Applied Ecology*, 42(4), 605-615.; Glasby, T. M., Connell, S. D., Holloway, M. G., & Hewitt, C. L. (2007). Nonindigenous biota on artificial structures: could habitat creation facilitate biological invasions?. *Marine biology*, 151(3), 887-895

¹³³ Kerckhof, F., Degraer, S., Norro, A., & Rumes, B. (2011). Offshore intertidal hard substrata: a new habitat promoting non-indigenous species in the Southern North Sea: an exploratory study. *Offshore wind farms in the Belgian Part of the North Sea: Selected findings from the baseline and targeted monitoring*. Royal Belgian Institute of Natural Sciences, Management Unit of the North Sea Mathematical Models, Marine ecosystem management unit, Brussels, 27-37.

York Bight including the proposed SFWF Project Area.¹³⁴ Demand for horseshoe crab continues to increase, while its population has been in decline.¹³⁵ The lack of analysis of the horseshoe crab's abundance and life stages within the SFWF area and surrounding waters is problematic, particularly because of the horseshoe crab's multi-use ecological and economic importance: (1) to fishermen's livelihoods, including as an important source of bait in the commercial fishing industry; (2) in biomedical research and use, including to U.S and global public health and in the production of COVID-19 vaccines; (3) as an important food source for migratory shorebirds, including the endangered red knot; and (4) as a food source for numerous marine species. Despite their economic, public health, and ecosystem importance, the only mention of the horseshoe crab in the DEIS is as follows:

*Economically important species, including Atlantic sea scallop, bay scallop (*Argopecten irradians*), horseshoe crab (*Limulus polyphemus*), Atlantic surfclam, squid, and ocean quahog, are also associated with soft sediments.*¹³⁶

It is unclear whether the South Fork Wind Fisheries Research and Monitoring Plan (as of May 2020) will collect additional information on horseshoe crabs beyond identifying them. Considering that direct loss of habitat and potential physical harm or death are likely to occur to the majority of horseshoe crabs present in the Area during construction, focused research is warranted, especially considering that they are substantially slower moving when buried in soft sediments in marine waters. Baseline data is urgently needed prior to construction, especially given the proximity of the project to a major spawning ground. Any adverse impacts to the horseshoe crab population would have subsequent consequences to biomedical research and public health. Given that there will be a substantial and permanent loss of soft-bottom (sand/mud) habitat in the proposed Project area, it is crucial that this loss of habitat be quantified and that predicted impacts to the horseshoe crab population and resultant losses to the commercial fishery be established.

The Project installation should not take place during a time of year when horseshoe crabs are known to be in the area, as opposed to inshore or in estuarine coastal waters and spawning grounds. Nearshore horseshoe crabs should also be avoided during shoreside infrastructure development, as they rely on beach dune habitat, which frequently erodes away with winter storms in the New England and northern Mid-Atlantic region.

6. Stock Redistribution and the "Artificial Reef Effect"

We commend the improvement over past analyses that only focused on species that benefit from structure and hard substrate associated with offshore infrastructure projects. In the DEIS, BOEM does a better job acknowledging that all species may not benefit from these changes in substrate, incomplete understanding of whether stock abundance will increase, and where there will just be a redistribution of biomass. RODA reiterates that increases in hard substrate as a net benefit for biological species is an egregious oversimplification, and recommends that habitat conversion be looked at holistically for all species found

¹³⁴ ASMFC (2019). 2019 Horseshoe Crab Benchmark Stock Assessment and Peer Review Report. May, 2019. Alexandria, VA: Atlantic States Marine Fisheries Commission. 271 p. http://www.asmfc.org/uploads/file/5cd5d6f1HSCAssessment_PeerReviewReport_May2019.pdf.

¹³⁵ Walls, E.A., J. Berkson, & S. A. Smith. (2002). The Horseshoe Crab, *Limulus polyphemus*: 200 Million Years of Existence, 100 Years of Study. *Reviews in Fisheries Science*, 10(1): 39-73; Maloney T, Phelan R, Simmons N (2018) Saving the horseshoe crab: A synthetic alternative to horseshoe crab blood for endotoxin detection. *PLoS Biol* 16(10): e2006607. <https://doi.org/10.1371/journal.pbio.2006607>.

¹³⁶ SFWF DEIS, p. 3-8.

in the region. Below, we outline some consideration for BOEM to include as they work to better inform how habitat alteration will impact species distribution.

Habitat alteration is of concern, particularly the decrease in soft-bottom habitat, which is important to numerous species that are fished commercially and recreationally in the proposed SFWF energy area. The Rhode Island Department of Environmental Management (RIDEM) wrote a letter to BOEM commenting on the unfinalized Supplemental Environmental Impact Statement for Vineyard Wind 1.¹³⁷ They present a brief summary of predicted impacts to species of commercial interest. As many studies show, they highlight how some species may benefit while others could be negatively impacted. Those that are structure-oriented may benefit (e.g., black sea bass, tautog), whereas species with soft-bottom habitat preferences (e.g., flatfish, squid, and scallops) will likely be negatively affected.

Researchers in Europe point out that wind turbines have been installed in regions characterised by a soft sandy benthic environment, such as the North Sea, where hard substrate and intertidal regions are uncommon, and that they therefore represent a large-scale increase in local habitat heterogeneity that may lead to a regional shift from sediment associated benthic to hard bottom and intertidal communities.¹³⁸ Potential lower income, revenue, and economic viability of fisheries associated with soft-bottom is anticipated but not comprehensively analyzed in the DEIS.

There may be cascading effects on fish communities as a result of the type of epifaunal organisms—i.e., food resources for larger fish, that settle on and colonize turbine surfaces. For instance, a study including stomach content analysis by Reubens et al. (2011) showed that pouting demonstrated preference for prey species found on turbines, including *Jassa herdmani* and *Pisidia longicornis*.¹³⁹ WEAs will be subject to varying environmental conditions, and as such, resultant impacts to local species and ecology need to be studied and evaluated on an individual basis.

A review by the Science Center for Marine Fisheries on the unfinalized Vineyard Wind SEIS also discusses the potential for the wind energy areas to serve as artificial reefs, which would be expected to have a positive impact on the density of fish that utilize structure.¹⁴⁰ If a reef effect was realized and all possible leases were built out, it could result in the largest ‘artificial reef’ in U.S. waters. It is not known whether the lease areas will result in a larger reef complex with cascading or interaction effects, or what converting a large area of the Atlantic EEZ to “reef complex” will mean for the regional ecosystem.

The “artificial reef” effect is frequently cited as a benefit for harvesting; wind energy areas can exclude fishing effort. Due to the potential increases in abundance or aggregation of certain mobile and demersal species in WEAs, the concept of feasible fishing around turbines is nuanced. It is important to ascertain whether it will be possible for fishermen to take advantage of any increase in (or aggregation of) stocks, or whether practical constraints (such as insurance costs, safety zones, gear compatibility) and/or perceived high risk by fishermen will prevent this from happening.

¹³⁷RIDEM 2020 Available at: http://www.dem.ri.gov/programs/bnatres/marine/pdf/RIDEM_VW_SEIS_2020.pdf

¹³⁸ Causon, P. D., & Gill, A. B. (2018). Linking ecosystem services with epibenthic biodiversity change following installation of offshore wind farms. *Environmental Science & Policy*, 89, 340-347.

¹³⁹ Reubens, J. T., Steven Degraer, and Magda Vincx. "Aggregation and feeding behavior of pouting (*Trisopterus luscus*) at wind turbines in the Belgian part of the North Sea." *Fisheries Research* 108 (2011) 223-227).

¹⁴⁰SCEMFiS “Review of “Vineyard Wind 1 Offshore Wind Energy Project Supplement to the Draft Environmental Impact Statement” 2020. Available at: https://scemfis.org/wp-content/uploads/2020/07/wind_report_final-1.pdf.

As there are potentially enormous consequences from shifting habitat types on species distribution, RODA disagrees that “Project O&M would cause fewer impacts to fish, invertebrates, benthic habitats, and EFH than Project construction. The foundation piles and associated scour protection would create an artificial reef effect, which could result in minor beneficial effects to species distribution, community composition, and predator-prey interactions in the vicinity.”¹⁴¹ This is an oversimplification of the very complex concept of habitat preference. To begin to understand these changes, stock redistributions need to be monitored and assessed over the lifespan of the project.

g. Habitat Areas of Particular Concern Impacts

Habitat Areas of Particular Concern (HAPC) are specific types of areas that constitute a subset of EFH. The Magnuson-Stevens Act directs their inclusion in fishery management plans based on the habitat’s ecological function importance, sensitivity to human-induced environmental degradation, extent of stress induced by development activities, and rarity.¹⁴² NMFS policies state that an area’s status as an HAPC should lead to special attention regarding the adverse effects from fishing or other activities in the designated area, and an EFH concurrence for actions affecting HAPCs should be subject to a higher level of scrutiny than those that do not.¹⁴³

Concerns about HAPCs and EFH in the SFWF project area were raised by commenters during the preparation of the Environmental Assessment for lease issuance. In response, BOEM made no substantive changes to the EA but committed to “consult with the NMFS regarding any special leasing considerations to minimize or avoid impacts essential fish habitat and HAPCs and will review submitted plans to ensure that sensitive benthic habitats are avoided in the siting of meteorological towers and/or buoys.”¹⁴⁴ It has failed to meet that commitment.

The DEIS states that the area of “direct effects” for the SFWF project overlaps HAPC for two fish stocks: summer flounder and juvenile Atlantic cod. Importantly, it is impossible to evaluate whether the project will have impacts to other HAPCs, or expanded portions of the referenced HAPCs, given the deficiencies in the DEIS’s definition of affected environment described earlier in these comments. BOEM must evaluate whether HAPC for any managed fish stock in the entire area of indirect effects for the proposed SFWF project as well as a cumulative activities scenario.

Despite the importance of these areas for fish stocks and fisheries management, the documents in the SFWF docket pay them treatment much closer to ignorance than “special attention.” The term “HAPC” appears in the EFH assessment submitted with the COP only in the references section as part of the title of the NEFMC’s omnibus habitat amendment. The DEIS, for its part, provides just a few words on the definition of HAPC and limits the entirety of its analysis to two statements:

1. “Neither summer flounder HAPC [] nor juvenile cod HAPC [] occur within the footprint of the O&M facility; therefore, no significant impacts to HAPCs are anticipated from Project O&M.”

¹⁴¹ SFWF DEIS, p. iv.

¹⁴² 50 C.F.R. § 600.815(a)(8)).

¹⁴³ See 82 Fed. Reg. 51492 (Nov. 6, 2017).

¹⁴⁴EA at 5-7 https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/Renewable_Energy_Program/State_Activities/BOEM%20RI_MA_Revised%20EA_22May2013.pdf

2. “Construction is not expected to affect HAPCs for summer flounder (i.e., HAPC is limited to areas of [submerged aquatic vegetation]) because DWSF would take measures to avoid all [submerged aquatic vegetation] during construction.”

The first statement may well be true; as no map is provided it is difficult to compare the footprint of the HAPCs with the affected environment of the proposed action or the cumulative action scenario. The second statement, however, appears facially inaccurate; how would HDD, jetplowing, and related activities be conducted with total avoidance of vegetation? At a minimum, BOEM must provide far greater detail supporting its conclusion of no impacts.

h. Physical Oceanographic Impacts

The DEIS inadequately analyzes the potential impacts on the Mid-Atlantic cold pool, instead relying on a biological opinion (BiOp) prepared by the National Marine Fisheries Service.¹⁴⁵ However, the DEIS glosses over that the opinion is focused only on Vineyard Wind I project and not the cumulative buildout of over 2,000 turbines along the east coast, which may result in a sufficient impact to adversely affect the cold pool. Also, the DEIS directly quotes the BiOp but chooses to leave the scale of the VW project out of the quote making it harder for the public to understand the context. The Science Center for Marine Fisheries (SCeMFiS) prepared a report titled “Could federal wind farms influence continental shelf oceanography and alter associated ecological processes? A literature review.”¹⁴⁶ SCeMFiS is a National Science Foundation Industry/University Cooperative Research Center that “utilizes academic, recreational and commercial fishery resources to address presently urgent and emerging scientific problems that could limit sustainable fisheries.” The report highlights the unique feature that the Mid-Atlantic cold pool is and its importance to the region.

The DEIS does not improve the public’s understanding of potential interactions between turbines and stratification processes that characterize the cold pool. The SCeMFiS report reviews available research but discussion of impacts on the cold pool is limited as there are not large scale OSW developments comparable to what is planned for the Atlantic to use as a basis. There is some research from Europe that can inform our inferences, however the cold pool is unique to the U.S. because of its size and level of stratification. The report outlines available research that indicates turbines and their foundations likely will have an impact on both atmospheric and oceanic processes but are influenced by multiple factors including “study site, wind speed conditions, turbine size, farm size and orientation, and underlying oceanographic and atmospheric conditions.”¹⁴⁷ Foraging, and other biological necessities, by marine mammals and fish species may be affected by changes in the cold pool. If the cold pool is disrupted and primary production is reduced, prey species would also be expected to decline, negatively affecting multiple trophic levels. Additional research is needed to estimate the extent of potential changes to the size, location, and strength of the cold pool.

¹⁴⁵ NMFS. 2020. Biological Opinion for Vineyard Wind’s Offshore Wind Energy Project. Available at: <https://repository.library.noaa.gov/view/noaa/27243>.

¹⁴⁶ Science Center for Marine Fisheries. 2020. Could federal wind farms influence continental shelf oceanography and alter associated ecological processes? A literature review. Available at: <https://scemfis.org/wp-content/uploads/2021/01/ColdPoolReview.pdf>.

¹⁴⁷ *Id.*

i. Social Impacts

1. Culture and Heritage of Fishing Dependent Communities

Many coastal communities along the eastern seaboard have rich maritime and fishing traditions that still exist today. The DEIS relies upon data from the National Marine Fisheries Service to characterize the commercial fishing industry and ocean economy GDP from the U.S. Bureau of Economic Analysis (2020) and National Ocean Economics Program (2020). While these can provide some insight to the GDP generated from harvesting and ocean-related activities, it must be noted that the DEIS fails to evaluate potential impacts to the culture and heritage of fishing communities, coastal communities, and working waterfronts.

The unique and historic cultures of these communities, heavily dependent on fishing, provides a strong sense of community that spreads far and wide. Policies must be designed to protect and promote these irreplaceable and iconic communities, not supplant them with industrial development. Impacts to these traditionally vital, culturally rich populations must be included in the DEIS analysis beyond simple community descriptions.

2. Environmental Justice Concerns

Under Executive Order 12898 and accompanying Presidential Memorandum,¹⁴⁸ federal agencies must analyze environmental justice in minority and low-income populations in NEPA reviews. The DEIS nominally analyzes impacts of the proposed action and alternatives to environmental justice (EJ) populations but does not consider the EJ value of other employers and activities that will be impacted from the development of offshore wind. The fishing industry—for which BOEM can and should analyze existing workforce information—supplies significant employment, if not the majority of jobs, in EJ communities up and down the coast,¹⁴⁹ including tens of thousands of jobs that are highly specialized but do not require formal training. Seafood processing, in particular, is heavily dependent on labor from first generation immigrants.¹⁵⁰

If biological resources or fishing operations are negatively impacted from build out of wind energy areas, employment opportunities for EJ demographics are likely to be reduced. RODA’s members report significant employment of EJ populations.¹⁵¹ For example, one large east coast processor that shared employment records with RODA reports 74% of its workforce of 500-1000 employees are people of color, immigrants, or English as a second language (ESL) learners. We estimate that other fishing companies have similar demographics. Therefore, jobs lost in the fishing industry will have EJ consequences and thus must be evaluated by the DEIS.

¹⁴⁸Exec. Order No. 12898, C.F.R. 7629-7633, 1994. https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/Req-EO12898envjustice.pdf

¹⁴⁹See National Marine Fisheries Service, *New Bedford, MA: Community Profile*, <https://www.nefsc.noaa.gov/read/socialsci/pdf/community-profiles/MA/new-bedford-ma.pdf>

¹⁵⁰ New American Economy, *Sea to Table: The Role of Foreign-Born Workers in the Seafood Processing Industry* (2017), available at: <https://research.newamericaneconomy.org/report/sea-to-table-the-role-of-foreign-born-workers-in-seafood-processing-industry/>.

¹⁵¹ There are various specific definitions of what constitutes such a population, which share similar elements, such as the State of Massachusetts *Environmental Justice Policy* definition of “a neighborhood whose annual median household income is equal to or less than 65 percent of the statewide median or whose population is made up 25 percent Minority, Foreign Born, or Lacking English Language Proficiency”)

Lastly, under the power purchase agreement with LIPA, the SFWF will cost an average residential customer on Long Island between \$1.39 and \$1.57 per month.¹⁵² While the average monthly rate provides some information of future energy costs, the DEIS fails to analyze which communities will pay more or less for the power provided, and consequential impacts to low-income households. BOEM falls short of a complete environmental justice review as required by NEPA, as higher energy rates from the SFWF will affect environmental justice communities.

3. *Mental Health Considerations*

An often-overlooked issue in the commercial fishing industry is mental health. While there is little to no data on mental health illnesses amongst commercial fishermen, New England fisheries are cited as being one of the most dangerous civilian jobs in the country. As already an incredibly risky and dangerous job, we recommend more weight be given to how the SFWF and other offshore wind development areas will not only increase risk for fishermen, but will also add heightened stress to an already dangerous industry. Fishermen live with job insecurity on a regular basis due to external threats such as waterfront development, cost-of-doing business, changes in species abundance, climate change and now offshore wind development. Research shows that stress from job insecurity directly causes mental health impairment and negatively affects well-being¹⁵³ Complete analysis of the social impacts from this wind project and others should consider contributions to job insecurity for industries that may be negatively affected by development.

j. Jobs

As RODA has stated numerous times, the level U.S. job creation often quoted for offshore wind projects appears inflated and misleading. First, there is no information in the DEIS on jobs created for the O&M phase of the SFWF project. Long-term jobs, such as those for the O&M phase of the project, are particularly important for the local workforce and should be fully analyzed by BOEM.

The DEIS analysis only examines FTE (full-time equivalent) jobs created during the development and construction phase. It assumes the development and construction phase will last three years¹⁵⁴ meaning estimates in Table F-9 are 1/3 of the FTE jobs available. For example, this means the total jobs (direct and supply chain) would be from 403-529 in a year under the 90-180 MW capacity scenarios to the Beach Lane Landing Site. Additionally, Section 4.6.1.2 of the COP outlines that local hiring may be limited and “the size of the non-local construction workforce could be large relative to the construction workforce hired locally,” and “non-local construction personnel would typically include mariners, export cable manufacturing personnel, and other specialists.”¹⁵⁵ While we are not experts on the types of jobs that will support OSW construction,¹⁵⁶ we do understand that the huge majority of them require highly specialized

¹⁵² ([LIPA-First-Offshore-Wind-Farm-Doc-V19_102819-FINAL.pdf \(lipower.org\)](#))

¹⁵³De Witte, H., Pienaar, J., & De Cuyper, N. (2016). Review of 30 years of longitudinal studies on the association between job insecurity and health and well-being: Is there causal evidence? *Australian Psychologist*, 51(1), 18–31. <https://doi.org/10.1111/ap.12176>; Llosa, J. A., Menéndez-Espina, S., Agulló-Tomás, E., and Rodríguez-Suárez, J. (2018). Job insecurity and mental health: a meta-analytical review of the consequences of precarious work in clinical disorders. *An. Psicol.* 34, 211–221.

¹⁵⁴ SFWF DEIS, p. F-7.

¹⁵⁵ SFWF DEIS p. F-9.

¹⁵⁶ We defer to the expert analysis of Georgetown Economic Services, which to our knowledge is one of the OSW job projection models that is not sponsored by OSW advocates. That report found several flaws in previous BOEM and

certifications and eligibility criteria. There is no indication whatsoever, in the DEIS or elsewhere to our knowledge, of how many of these jobs would be sourced from local communities, or on what timeline. Not only are there simply not that many long-term jobs available, there is no guarantee that the local workforce will be hired.

Furthermore, the analysis of the input/output models, such as the JEDI-OWM used in the DEIS, does not account for gross employment impacts, including the displacement of other industries. The DEIS does not attempt to predict how many fishing jobs will be lost or otherwise impacted due to this new ocean use, which may occur based on a number of reasons including resource impacts, displacement, induced management changes, insurance cost and availability, increased operational costs from factors such as transit time, market impacts, fuel and so on. In previously submitted comment letters, RODA has also referenced several items that were not considered at the time, such as calculations of shoreside impacts to fisheries, and these remain unaddressed.¹⁵⁷ We maintain that the economic importance of fishing, and economic losses associated with loss of fishing grounds and indirect effects have been systematically underrepresented, both in this DEIS and throughout the OSW development process.

U.S. commercial fishermen must adhere to federal maritime employment regulations, including the Jones Act. As all operations in the EEZ must abide by the Jones Act, this should apply equally to OSW development and operations. To date there are few to no installation or support vessels for OSW construction and maintenance available in the U.S., which creates a double standard for other on the water operators. In fact, the largest OSW trade association, the American Clean Power Association recently stated “[w]hile the Jones Act applies to the transportation of materials to offshore renewable energy, it does not apply to construction.” Since the submission of the SFWF COP, there have been notable developments with the interpretation of the Jones Act and its application to offshore development. The percentage of U.S.-based jobs is predicted to be between 50 and 63% by 2022 based on one report cited in the DEIS.¹⁵⁸ However, this report and consequently BOEM do not clarify assumptions for domestic versus international jobs. The analysis of jobs sourced in the U.S.¹⁵⁹ utilized by the DEIS also happened prior to the January 1, 2021 passage of the National Defense Authorization Act, recent U.S. Customs and Border Protection ruling letters, and Executive Order 14005 “Ensuring the Future Is Made in All of America by All of America’s Workers” and thus domestic jobs summarized by the DEIS should be updated in light of these updates. Further analysis and justification is needed to quantify the true number of domestic jobs created, including for marine operators. Until OSW jobs and materials are required to be sourced in the U.S., the promised economic benefits and jobs will not materialize.

Finally, the DEIS must evaluate whether the local tourism industry and associated jobs would be impacted by OSW. Working waterfronts and associated touristic activities include watching offloading of fish catch, eating at local fresh fish restaurants, watching fishing gear being mended, and interacting with memorable commercial fishermen. BOEM should consider changes to the working waterfront that may occur with the loss of these activities, whether or not these areas would lose their draw to tourists, and any associated or cascading economic losses to the town(s) impacted by OSW vessels replacing fishing boats.

OSW industry estimates. RODA submitted this report under the Vineyard Wind SEIS docket and incorporate its findings here by reference.

¹⁵⁷ <https://rodafisheries.org/wp-content/uploads/2020/08/190222-VW-DEIS-comments-FINAL.pdf>.

¹⁵⁸ BVG Associates Limited. 2017. U.S. Job Creation in Offshore Wind. NYSERDA Report 17-22. Prepared for New York State Energy Research and Development Authority. Available at: <https://www.nyserda.ny.gov/-/media/Files/.../US-job-creation-in-offshore-wind.pdf>.

¹⁵⁹ BVG 2017; AECOM 2018.

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In summary, successful American fisheries are founded on an extremely complex combination of operational needs, market conditions, cultural and historical traditions, effective management, and robust science, and more. Changes in one part of the system can have reverberating effects through the rest, so it is imperative to understand and minimize risk to the extent possible in order to maintain healthy, safe seafood production and communities.

Thank you for your consideration of these comments and your commitment to working with RODA and our members to improve the balancing of the goals and needs of fisheries and offshore wind energy. Please do not hesitate to reach out if we can provide additional information or clarification.

Sincerely,



Annie Hawkins, Executive Director



Fiona Hogan, Research Director



Lane Johnston, Programs Manager



Cori Currier, Marine Research Consultant
Responsible Offshore Development Alliance