



*Responsible Offshore Development Alliance*

June 1st, 2021

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

**Re: Notice of Intent to Prepare an Environmental Impact Statement for Revolution Wind LLC’s Proposed Wind Energy Facility Offshore Rhode Island; Docket No. BOEM-2021-09048**

Dear Director Lefton:

The Responsible Offshore Development Alliance (RODA) submits the following comments regarding the Bureau of Ocean Energy Management’s (BOEM) Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for Revolution Wind LLC’s Proposed Facility Offshore Rhode Island.<sup>1</sup> 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.

RODA and its members have collectively submitted dozens, if not hundreds, of comment letters outlining significant concerns associated with offshore wind energy (OSW) development to BOEM and its cooperating federal and state agencies. As the issues outlined in those letters have not been addressed to date, we incorporate all past correspondence by reference and do not repeat the entirety of these consistent, clear, and reasonable previously raised requests.

These comments focus on five main topics relevant to this large project: (1) deficiencies in the COP that require correction before continuation of National Environmental Policy Act (NEPA) review; (2) the need for proper scoping and framing under NEPA, including through the preparation of a Programmatic EIS; (3) a description of ongoing project activities that are not previously authorized or analyzed in accordance with the law; (4) specific alternatives for inclusion in any future EIS for Revolution Wind; and (5) other items that must be analyzed in an EIS.

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<sup>1</sup> 86 Fed. Reg. 22972 (Apr. 30, 2021).

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I. THE COP IS DEFICIENT WITH REGARD TO FISHERIES REQUIREMENTS

By issuing this NOI, BOEM proffers to have deemed the Revolution Wind Construction and Operations Plan (COP) complete and adequate for public review. However, the COP available under this public comment fails to meet BOEM’s requirements for approval due to the absence of information regarding the fisheries monitoring and communication plans. These deficiencies constitute a fatal flaw in the NEPA process and BOEM must delay any further NEPA actions until a complete COP is available for review.

A. Fisheries Communication Plan

The Fisheries Communications Plan (FCP) provided is generic to Ørsted’s entire North American operations. While the COP states “[c]ommunications and outreach with the commercial and recreational

fishing industries will be guided by the Project-specific Fisheries Communication Plan” (p. ES-23), no project-specific plan appears to exist. For more detailed comments on Ørsted’s FCP in general, please refer to RODA’s comment letter to BOEM on the South Fork Wind Farm Draft Environmental Impact Statement earlier this year.

While Ørsted’s generic FCP does assert that it has “held 73 meetings with 59 individual fisheries stakeholders on the topic of Revolution Wind,” RODA is unable to corroborate this claim and outreach to our members has indicated that most or all are unaware of any project specifics. Moreover, RODA and our members have repeatedly documented our concerns over approaches taken by OSW developers that prioritize quantity over quality of meetings by referencing metrics of number of meetings, names on contact lists, etc. over true two-way communications that could result in meaningful partnerships. It is extremely disappointing to see Ørsted and BOEM issue yet another document for public comment that perpetuates this objectionable strategy.

The COP also states that Revolution Wind will “partner with [RODA] to create an opportunity for the commercial fishing industry to provide direct input to the wind energy industry” (p. 17). This is not occurring, and has never taken place for the Revolution Wind project.

BOEM’s presentation of project information does nothing to make up for the lack of fisheries communications on this project. As we have requested of BOEM, developers, and states in the past, no effort has been made by any entity to work directly with the fishing industry to provide readily accessible information. Repeatedly, fishermen have requested Ørsted and other Atlantic leaseholding developers to improve the basic dissemination of project information—shoreside 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 application 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.<sup>2</sup>

Unfortunately, while the fishing representatives on the Task Force prioritized development of this project, the OSW developer members did not, and the Task Force is no longer operational. 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.

## B. Fisheries Monitoring Plan

The Fisheries and Benthic Monitoring Plan presented with this public comment notice states only “currently under development.” Such monitoring plans are a requirement of COP submission under BOEM’s

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<sup>2</sup> We emphasize that efforts to improve OSW information dissemination without direct co-planning from fishing industry leaders have typically failed to meet this community’s needs, as fishermen have unique preferences for information consumption that cannot be deduced through outside-in approaches.

guidelines, which are appropriately referenced in the COP. These guidelines explicitly state “a commercial-scale wind energy project may need additional site-specific survey work prior to the submittal of a construction plan” and “BOEM recommends applicants submit a fish survey plan with a SAP, COP, or GAP survey plan.”<sup>3</sup> Clearly this has not occurred, and must be corrected immediately because: (1) fisheries surveys are considered “site characterization” activities that may occur before any true NEPA review at all; and (2) the project timeline proposes construction in 2023, leaving inadequate time to collect any useful baseline data once plans are approved. This deficiency must be immediately corrected before further review and monitoring plans must be included in documents for public comment in advance of EIS scoping.

RODA is unaware of Ørsted’s monitoring plans for the Revolution Wind project but notes that the company is actively participating in efforts by the Responsible Offshore Science Alliance (ROSA) to better coordinate fisheries monitoring throughout the region. While we hope that these joint efforts will lead to improvements in data collection, analysis, and utility, they are in their infancy and it cannot be assumed that voluntary efforts will remain in effect nor result in acceptable outcomes. BOEM must require developers to participate in cooperative monitoring and research programs that adequately examine the cumulative impacts of OSW activities across WEAs. Currently, such coordination is left to the developers’ discretion and considered a mitigation measure, which is inappropriate and inadequate.

Revolution Wind will not be developed in isolation and cannot be treated as a stand-alone project. RODA is not aware of any requirements for the project to coordinate cooperative research and monitoring plans with developers of geographically relevant lease areas, including Ørsted’s other projects such as South Fork. The environmental impacts of Revolution Wind will be cumulative to those of other projects for multiple fish stocks (and oceanographic processes) and these must be coordinated to maximize the utility of any data that is collected.

We strongly urge BOEM to require developers to partner with the fishing industry and credible independent scientists to co-develop cooperative monitoring and research plans for the leases and ensure that each project’s research is well coordinated with the other. This should be common practice for all wind development lease areas but particularly for geographically adjacent leases. Participation in ROSA’s efforts should be incentivized, but oversight is also required should best practices not be implemented.

## II. BOEM’S NEPA PROCESS FOR OFFSHORE WIND PROJECTS REQUIRES SIGNIFICANT REVISIONS

### A. BOEM Must Prepare a Programmatic EIS Including All Atlantic Leasing Activities

RODA again calls upon BOEM to develop suitable Programmatic Environmental Impact Statements by region, with tiered analyses for individual projects or contiguous lease areas. This is the only approach that will both meet NEPA’s requirements and allow for effective public comment opportunity. *Fishermen, scientists, managers, and other non-OSW professionals simply cannot provide meaningful comments on*

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<sup>3</sup> BOEM. Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585 (2019).

*each individual project BOEM plans to review in the near term. Without the ability to provide consolidated reviews and comments, the quality of decision making and project planning and the ability to find suitable mitigation measures will be strongly jeopardized.*

To date, the agency's cumulative impacts analyses for Atlantic projects have been unpredictable and inconsistent with NEPA. BOEM conducted a Programmatic EIS in 2007 that purported to analyze the development of offshore alternative energy in the Atlantic, but it was glaringly inadequate. It provided no details that would inform analysis of the impacts of offshore wind energy development in the New England region, predated the current scope of OSW under consideration, and included almost no information regarding fisheries impacts. Then, BOEM conducted a Supplemental EIS for the Vineyard Wind I project intended to provide cumulative effects information for the existing New England and Mid-Atlantic OSW lease areas. Presumably due to the termination of the Vineyard Wind I project during review of the Supplemental EIS, this document has not been referenced in subsequent projects. During the same period of environmental review for Vineyard Wind I, BOEM released a Draft EIS for the South Fork project that took an entirely different approach but provided grossly deficient explanation of the scope of review. It is wholly unclear how BOEM plans to address cumulative impacts at this time.

BOEM and OSW developers provide inconsistent approaches to whether projects should be considered on an individual or cumulative level, seemingly based on whichever is more convenient for a given issue. While Ørsted has merged its Fisheries Communication Plans and Notices to Mariners for multiple New England projects, the NEPA process to date has treated its South Fork and Revolution Wind projects as though they are entirely unrelated. Even within individual projects, the segmentation of BOEM's NEPA review means that their environmental impacts are not considered cumulatively across the entire project cycle from surveys to construction and operations to decommissioning.

The only effective remedy for this segmentation and unpredictability of the environmental review process would be to conduct a Programmatic EIS. BOEM has extensive experience with this approach through its oil and gas leasing program, and it is difficult to understand why it diverged from this effective and efficient approach for OSW permitting.

## B. Scoping and EIS Framing

### 1. The "Purpose and Need" Must Not Predetermine the Agency's Decision

NEPA review must be conducted 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).<sup>4</sup> 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."<sup>5</sup> Typically a purpose and need statement must incorporate this overarching purpose in conjunction with action-specific legislation, which in this case is the Outer Continental Shelf

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<sup>4</sup> See 40 C.F.R. § 1501.7(h).

<sup>5</sup> 42 U.S.C. § 4321.

Lands Act (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.<sup>6</sup>

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. It would *not* be based on achieving states’ OSW goals or the terms of private power purchase agreements executed outside of the NEPA process, as those would predispose the outcome of environmental review. If anything, the NEPA environmental analysis should inform power purchase contracts, not the inverse.<sup>7</sup> 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.<sup>8</sup>

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 EIS documents. If not, they should not be cited as the basis for these projects.

## 2. The EIS Must Adhere to Current Policy Frameworks

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.”<sup>9</sup> While congressional intent may have been to ensure that environmental values were not overlooked, in previous OSW documents prepared under NEPA it is the economic and technical considerations for which BOEM has provided 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.”<sup>10</sup> The

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<sup>6</sup> BOEM, Outer Continental Shelf Oil and Gas Leasing Program: 2017-2022 Final PEIS (Nov. 2016) p. 1-2.

<sup>7</sup> This point again highlights the need for a Programmatic EIS for the U.S. offshore wind leasing program.

<sup>8</sup> *Nat’l Parks & Conservation Ass’n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1072 (9th Cir. 2010).

<sup>9</sup> 42 U.S.C. § 4332(B).

<sup>10</sup> 40 C.F.R. § 1501.2(b)(2).

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.

Last month, in an extremely unusual announcement, Secretary Haaland directed the following to Department of Interior agencies regarding the recent NEPA revisions:

*Bureaus/Offices will not apply the 2020 Rule in a manner that would change the application or level of NEPA that would have been applied to a proposed action before the 2020 Rule went into effect on September 14, 2020.*<sup>11</sup>

It is impossible for the public to determine the meaning of this, much less its legality. CEQ regulations are not optional for agencies; they cannot cherry-pick whether to apply them or not. Does this imply that BOEM intends to continue operating its OSW leasing program under outdated NEPA regulations?

Additionally, in January of this year 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.<sup>12</sup> Despite this, BOEM has proceeded to carry out its regulatory policies promulgated under EO 13807 without clarifying how its rescission will be implemented. 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.

The public cannot be prepared to offer public comment—and BOEM cannot release a DEIS for such comment—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 review of various project elements? 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. We repeat our calls on BOEM to prioritize the provision of transparency and initiate a balanced planning process rather than racing to make decisions on projects without a coherent permitting framework. Partisan politics must not lead to biased, rushed, or chaotic decisions about a matter as important as our entire ocean commons.

### III. UNDERWAY ACTIVITIES DO NOT COMPLY WITH NEPA

OSW-related activities are already occurring in the lease area where the Revolution Wind project and others are proposed that have not undergone mandatory environmental review. These activities must be considered, analyzed, and authorized under appropriate NEPA practices including a Programmatic EIS.

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<sup>11</sup> Secretarial Order No. 3399, “*Department-Wide Approach to the Climate Crisis and Restoring Transparency and Integrity to the Decision-Making Process*” (April 16, 2021).

<sup>12</sup> Exec. Order 14008 § 7(b) (Jan. 27, 2021).

## A. Coordination of Fisheries Research Plans

As stated above, it is unclear whether Revolution Wind is conducting fisheries-related research despite BOEM's indications that all developers will follow its best management practices. If the public cannot ascertain whether research is occurring at all, it certainly cannot be expected to know the extent of that research or whether it is appropriately coordinated with other OSW projects and with fisheries science experts. BOEM must require such coordination, not just assume that its recommendations will be followed without oversight.

## B. Ongoing and Future Site Characterization Activities

RODA and its members are extremely concerned about ongoing impacts to fishing and the marine environment from the significant number of OSW survey activities in the U.S. Atlantic occurring over the past several years. To be clear, this is an enormous amount of activity, occurring round the clock, across a huge range of the Atlantic Outer Continental Shelf and inshore environments. *BOEM must take immediate action to address ongoing impacts from unregulated OSW surveys, and complete a Programmatic Environmental Impact Statement evaluating the cumulative impacts of all reasonably foreseeable OSW survey effort prior to additional activity.* Project-specific Environmental Assessments have not analyzed the readily conspicuous size and scale of these surveys' environmental, economic, and cumulative impacts.

Currently, the process for submitting geological and geophysical (G&G) survey information in Site Assessment Plans (SAP) does not allow for environmental review of the impacts of survey activities. BOEM requires the submission of G&G information in SAPs for both wind energy areas and cable routes,<sup>13</sup> but survey activities undertaken pursuant to the collection of this mandated information are not explicitly governed or permitted under any EA. Because survey information is collected *before* BOEM reviews a SAP,<sup>14</sup> there is no formal process for evaluating the environmental impacts of survey activities. However, the G&G survey equipment is known to cause harm to commercially harvested fishes<sup>15</sup> and the marine environment,<sup>16</sup> is used in a manner that displaces commercial fishing activity, and results in loss of or damage to fishing gear. Numerous RODA members have reported significant population-scale impacts to harvested species, particularly pelagic species including squids but also demersal species like whelks, after

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<sup>13</sup> 30 C.F.R. § 585.610.

<sup>14</sup> Notably, the public does not have an opportunity to comment on a SAP or even see a draft until after BOEM's approval.

<sup>15</sup> See, e.g., van der Knaap, Inge, 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>. While this study examines the effects of the low-frequency-sound pulses associated with oil and gas site characterization, it is unclear to what extent how those differ from sound and vibrations produced by current generation OSW surveys, as available public information spans a vast range of possibilities and we are unable to identify any instance in which BOEM has authoritatively disclosed this information.

<sup>16</sup> See Kunc HP, McLaughlin KE & R Schmidt. "Aquatic noise pollution: Implications for individuals, populations, and ecosystems." *Proceedings of the Royal Society B: Biological Sciences* (2016). <https://doi.org/10.1098/rspb.2016.0839>



periods of OSW survey vessel activity. In recent years, the scientific literature on acoustic impacts to commercially harvested stocks has broadened, and the best available science now corroborates the experiences of our members, showing that acoustic impacts from OSW projects and seismic surveys have localized and population-scale impacts to harvested species and their habitat.

Due to the G&G activities occurring outside of the NEPA process, NMFS is unable to conduct Essential Fish Habitat (EFH) consultations, despite the fact that geophysical surveys emit high amounts of acoustic energy, including shallow- and medium-penetration sub-bottom imaging systems that use ‘chirp’ and ‘boomer’ equipment.<sup>17</sup> In preparation of a SAP, G&G survey requirements only include a submission of a Biological Evaluation<sup>18</sup> to NMFS Protected Resources Division for the purposes of avoiding marine mammals. EFH assessments and consultations conducted in later project stages have also failed to adequately assess the impacts of G&G surveys to the acoustic environment, as these activities. For example, consultations for the Vineyard Wind and South Fork projects do not evaluate the projects’ impacts to EFH from acoustic surveys under the SAP or the COP.

It is unclear whether developers and their contractors are required to disseminate notices to mariners describing survey activities for the development of a SAP,<sup>19</sup> and they are not required to develop mitigation and compensation plans for gear lost as a result of pre-SAP surveys. U.S. commercial fishermen regularly report G&G survey vessels operating erratically, failing to adequately communicate with commercial fishing vessels operating on fishing grounds, failing to issue accurate notices describing their planned activity, and occasionally causing gear loss.

BOEM thus allows and even requires, without permitting, activities undertaken by OSW lessees and their contractors that cause significant financial harm to commercial fishing industry members in the form of lost or damaged fishing gear. Further, it allows the leasing of OSW project areas and permitting of activities that result in this destruction and loss without the establishment an adequate gear loss compensation program. Current approaches are piecemeal, administered poorly by developers, and often only developed long after survey operations begin, if at all.<sup>20</sup> RODA has called for the development of a uniform gear loss compensation program without any response or action from BOEM or the states. Such an approach is the

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<sup>17</sup> BOEM. “Guidelines for Information Requirements for a Renewable Energy Site Assessment Plan (SAP).” (June 2019). <https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf>.

<sup>18</sup> National Marine Fisheries Service. “Recommendations for the Contents of Biological Assessments and Biological Evaluations.” <https://www.nrc.gov/docs/ML0921/ML092170770.pdf>.

<sup>19</sup> When notices do occur, they take the form of developers distributing “Notices to Mariners” via emailed PDFs to inform fishermen of on-the-water activity on a periodic basis. As RODA has informed BOEM in the past, 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 developers to improve the basic dissemination of this critical project information. There remains an urgent need to support RODA in working with developers and the regulatory community to improve these communication streams.

<sup>20</sup> While there are instances in which our members have reported expedient processing of gear loss claims by certain developers, overall there remains significant confusion and consternation that OSW developers are unilaterally tasked with developing, arbitrating, and paying gear loss claims without any external, independent oversight or standardization.

norm in other industries, including oil and gas, but here follows the common OSW trend of limited regulation and oversight. This must be addressed before leasing decisions that would require additional survey activities. Continuing an unchecked, “Wild West” style survey effort for site characterization not only harms biological resources and impacts the fishing industry, but the cumulative impacts of all these surveys may cause irreparable damage to the marine environment.

#### IV. ALTERNATIVES FOR INCLUSION IN THE EIS

RODA submits the following recommendations for alternatives to be included in the environmental review for Revolution Wind.

##### A. Transit Lanes

RODA, and our members, have repeatedly raised concerns regarding the ability of vessels to safely navigate throughout the multiple areas identified and sold to offshore wind developers by BOEM. The EIS must include an alternative for reasonable transit lanes as consistently requested by fisheries operators since long before the submission of Revolution Wind’s COP, and BOEM must fully evaluate such transit lanes cumulatively across the Southern New England OSW lease areas. As the agency in charge of offshore wind permitting, leasing, and sales, BOEM has the authority, and responsibility, to fulfill this mandate and ensure the safety of all vessels operating in and around the WEAs. For the commercial fishing gear types found in the Revolution Wind 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.

BOEM’s responsibility does not end once the sale is completed or a COP is approved, and it must consider a developer’s proposed layout as only that—a proposal. To be clear, fisheries operators and experts neither requested nor agreed to the New England developers’ proposed 1x1 nm turbine spacing without additional transit corridors including the layout presented in the Revolution Wind COP. And to repeat, BOEM and USCG’s analyses of fishing vessel transit in the New England lease areas to date have been replete with missing information, unfounded conclusions, and absent or incorrectly referenced citations. The need for safe transit lanes of 4 nm has been raised time and again by fishermen and other fisheries experts, and we stand by the proposal submitted to BOEM on behalf of our members in January 2019. The full history of these requests is detailed in RODA’s comments to BOEM on the Vineyard Wind SEIS and South Fork DEIS.

Previous BOEM EISs have contained no analyses of the impacts of transit lanes to the following crucial topics: fishing economics, product quality, markets, fisheries management, and living marine resources that may benefit from migration corridors. They also fail to identify the history of collaboration and negotiation that led to the transit lane proposal. These topics must be given full due consideration in any EIS for future projects.

BOEM must also work with USCG to resolve inconsistent positions regarding the MA/RI Port Access Route Study (MARIPARS). While the Revolution Wind COP states that the 1x1 nm layout “has been

confirmed through expert analysis to allow for safe navigation without the need for additional designated transit lanes,” this statement does not match USCG’s representation of the MARIPARS findings. Analysis in the Massachusetts Rhode Island Port Access Route Study by USCG outlined traffic and navigation risks associated with the 1x1 spacing proposed by developers, but did 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, RODA filed an appeal of the 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 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.

Recent statements from USCG to our members have also indicated that MARIPARS was not intended to predict all downstream maritime traffic effects of OSW development, that analyses would be conducted anew for each project, and that cumulative effects analyses are currently insufficient to understand full build-out. Despite this, in both the EIS and Record of Decision for the Vineyard Wind project, BOEM relied solely on the MARIPARS study to assert that the layout preferred by the developer would provide sufficient navigational safety—cumulatively—across the New England lease areas.

BOEM must adequately analyze navigational safety in all EISs. This includes alternative turbine spacings beyond the uniform 1x1 nm spacing design supported by OSW developers for other WEAs. The MARIPARS is insufficient, as outlined above, and should not be solely relied upon for the determination of safety and navigation measures. The 1x1 nm supported by BOEM and the USCG was proposed by offshore wind developers and suggests a clear bias to the developers. The lack of adequate analysis of layouts proposed by the fishing industry based on expertise in fishing operations (vessel turning capabilities, gear functions, etc.) further supports this sentiment in the fishing community. The sale of public lands to developers combined with clear preference for their needs over other existing industries raises serious conflict of interest concerns about whether BOEM can maintain objectivity in OSW permitting decisions.

## B. Cable Burial Depth

Array design and spacing between turbines are fundamental determinants of the future, or lack thereof, of commercial fishing operations within wind development areas. It is extremely important that interarray and export cables are buried to sufficient depths to reduce the risk of fishing gear interactions. The fishing industry requests this to be a minimum of 8-10 ft. to avoid interactions; if a shallower depth is permitted, it must be paired with remote monitoring to ensure the cable remains adequately buried at all times. BOEM must provide clear standards as to what this depth is, how it is determined, and monitoring protocols to ensure there are no future interactions. Moreover, the project layout should be designed to minimize instances where cables transect fishing tow areas.

In contrast to fishing industry requests, the Revolution Wind materials indicate that Ørsted has proposed a burial depth target of only 4-6 ft. In the NEPA review of projects to date, BOEM has simply incorporated the developer's proposed burial depth in its description of project plans under the proposed action. However, interarray and export cable depth and routing are important variables that must be considered as fisheries mitigation measures. The EIS should evaluate a range of burial depths and monitoring techniques.

## V. OTHER ITEMS THAT MUST BE ANALYZED IN THE REVOLUTION WIND EIS

The primary justifications for rapid OSW development from BOEM, developers, and the Biden Administration are to reduce GHG emissions and to create U.S. jobs.<sup>21</sup> In order for the public to understand whether these tradeoffs are worth the negative environmental and economic effects associated with this development, explicit information must be provided through the NEPA process. Information on the following topics has not been included in previous BOEM environmental reviews. Each of these elements are critical components of the public's ability to develop meaningful input and for the agency to make a reasoned decision among project alternatives, and therefore must be included in the EIS.

### A. Energy Analysis

Previous NEPA documents released by BOEM have failed to include any analysis of the electrical benefits of OSW projects (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 CEQ NEPA regulations<sup>22</sup> 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 and ensure that any language regarding project benefits is thoroughly corroborated. While RODA unequivocally supports efforts to address climate change, there is little to no information from BOEM regarding what mitigative benefits to climate change are offered by the proposed 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 answered to date, and previous BOEM documents in fact state that projects will have negligible impacts on climate change.<sup>23</sup> This is especially important in

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<sup>21</sup> See, e.g., Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs (March 29, 2021). <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>.

<sup>22</sup> 40 C.F.R. § 1502.16(a)(10).

<sup>23</sup> BOEM. Vineyard Wind 1 Offshore Wind Energy Project. Supplement to the Draft Environmental Impact Statement. OCS EIS/EA. BOEM 2020-025 at A-45-46.

order for 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.<sup>24</sup>

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.<sup>25</sup> 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.

## B. Cost Analysis

There is little peer-reviewed information regarding the economic 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 EIS 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, as well as cumulative. The public must understand the overall Revolution Wind project cost, contract price for power purchase agreement, 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 to make even a basic informed evaluation of the project's desirability or whether BOEM's final project decision will constitute a reasoned decision among alternatives.

OSW appears to have widely different costs and benefits as compared to other renewable power sources. 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 co-location of agrivoltaic solar projects. We do not know if similar examples exist for OSW; regardless, a comparison of relative costs and environmental impacts of alternative technologies should be included in the EIS.

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<sup>24</sup> 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.

<sup>25</sup> See <https://www.eenews.net/greenwire/2021/02/19/stories/1063725503>.

BOEM regularly conducts economic cost-benefit analyses for oil and gas activities, and it is unclear why it does not follow the same approach for OSW. This disparity is abundantly obvious in last year’s “Economics Issue” of the agency’s *Ocean Science* newsletter.<sup>26</sup> That bulletin appears to describe how BOEM evaluates tradeoffs, costs, and benefits across its programs. While it provides a user-friendly overview of how it prepares cost estimates for OCS oil and gas projects, the OSW-related sections merely repeat vague descriptions of the leasing process without any economic information whatsoever.

### C. Greenhouse Gas/Climate Analysis

As stated above, the public messaging associated with 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, it is impossible to evaluate without 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.<sup>27</sup>

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. It is also important to understand both what amount of GHG would be offset by these projects, as well as what additional emissions may be produced. Activities associated with renewable energy including OSW will contribute to carbon emissions and more information is needed as to the scale of this contribution. Resource-intensive activities associated with production of turbine components and batteries will have further impacts. 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.<sup>28</sup> However, it will be impossible to know whether components will be recycled after Revolution Wind is decommissioned if this information is not included in the EIS.

Finally, a GHG analysis must 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.<sup>29</sup> It is estimated that just two people with high meat consumption replacing that meat with fish would save the

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<sup>26</sup> BOEM. 2020. Ocean Science 17(2) <https://www.boem.gov/sites/default/files/documents/newsroom/ocean-science/BOEM%20Ocean%20Science%202020%20Issue%202.pdf>.

<sup>27</sup> Wang & Sun. 2012. Life cycle assessment of CO2 emissions from wind power plants: Methodology and case studies. *Renewable Energy*. 43: 30-36.

<sup>28</sup> *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](http://www.climateexchange.org.uk/files/4014/3325/2377/Main_Report_-_Life_Cycle_Costs_and_Carbon_Emissions_of_Offshore_Wind_Power.pdf).

<sup>29</sup> Ray Hilborn *et al.* August 2018. The environmental cost of animal source foods. *Frontiers in Ecology and the Environment* 16(6).

emissions equivalent of about driving 6,000 miles over the course of a year.<sup>30</sup> Carbon emissions associated with seafood production in countries with less stringent environmental regulations (i.e. outside the US) 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.

#### D. 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.<sup>31</sup> Construction and transportation of turbines, and their custom components, contribute to carbon emissions<sup>32</sup> 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. 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 enforced. 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. The more project activities that occur in far ranging ports, the greater the carbon emissions of transportation and the fewer economic benefits that accrue to the most impacted communities. There is the potential for economies of scale where larger turbines have lower carbon emissions associated with construction.

The EIS must specifically consider economic, social, and environmental impacts to regional ports. 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.<sup>33</sup> The

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<sup>30</sup> Peter Scarborough *et al.* 2014. Dietary greenhouse gas emissions of meat-eaters, fish-eaters, vegetarians and vegans in the UK, *Clim. Change* 125(2): 179–192.

<sup>31</sup> 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>.

<sup>32</sup> Wang and Sun, 2012, *supra*.

<sup>33</sup> Scott-Smith, Brian. “New London State Pier Businesses Scramble to Relocate Following Vacate Order.” WSHU Public Radio (Nov. 18, 2020). <https://www.wshu.org/post/new-london-state-pier-businesses-scramble-relocate-following-vacate-order#stream/0>.

socioeconomic impacts should analyze the number of jobs that could be lost as a result of these redevelopments adversely impacting other industries.

### E. Jobs

As RODA has stated numerous times, the level of U.S. job creation often quoted for offshore wind projects appears inflated and misleading. 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. While we are not experts on the types of jobs that will support OSW construction and operations,<sup>34</sup> it is clear that the huge majority of them require highly specialized certifications and eligibility criteria. There is no indication whatsoever in public records 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. The lack of turbine manufacturing capacity within the U.S., combined with the rapid buildout schedule, adds to the concern that OSW will generate fewer jobs in the U.S. than promised.

Furthermore, BOEM analyses do not account for gross employment impacts, including the displacement of other industries. The EIS must evaluate 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 have not been considered, such as calculations of shoreside impacts to fisheries, and these remain unaddressed.<sup>35</sup> We maintain that the economic and environmental justice importance of fishing, and economic and cultural losses associated with loss of fishing grounds and indirect effects have been systematically underrepresented 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.” Estimates in the Revolution Wind EIS must account for recent developments in the interpretation of the Jones Act and its application to offshore development and provide explicit criteria for estimating domestic versus international jobs. Succinctly put, 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 EIS 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,

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<sup>34</sup> 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 OSW industry estimates. RODA submitted this report under the Vineyard Wind SEIS docket and incorporate its findings here by reference.

<sup>35</sup> See, e.g., <https://rodafisheries.org/wp-content/uploads/2020/08/190222-VW-DEIS-comments-FINAL.pdf>.



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.

#### F. Extreme Weather Effects

Current turbine designs 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 Northeast 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.”<sup>36</sup> The EIS must analyze how gusts and wind shifts during extreme weather events may damage turbines and negatively impact energy generation capacity.

#### G. Icing

Ice accumulation on turbines is a known issue for wind energy areas in cold climates. 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. 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 EIS. 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.

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,<sup>37</sup> 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 fragment, rotor position, and wind speed.<sup>38</sup> Although those cited studies do not necessarily suggest icfall 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

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<sup>36</sup> 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](http://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017GL073537).

<sup>37</sup> Colin Morgan et al., *Assessment of Safety Risks Arising from Wind Turbine Icing*, EWEC-CONFERENCE (Oct. 1997), at 141-144.

<sup>38</sup> 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>).

up to several hundred meters.<sup>39</sup> Indeed, the NYT article plainly 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.

## H. 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. Despite this requirement, the Revolution Wind COP does not provide enough evidence that Ørsted is prepared to meet these requirements at the end of the project's life cycle. Instead, it presents a "figure it out later" approach common in OSW planning, indicating only that decommissioning will involve removing project components to a depth of 15 ft. below the mudline.

Previous BOEM NEPA reviews have contained wholly inadequate analysis and details of project decommissioning, and in fact have referred to such decommissioning as "conceptual." No part of decommissioning should be considered "conceptual" or allow for decommissioning to potentially not occur for all project components. Additionally, if full decommissioning is not possible or required then the EIS analysis must reflect this. Alternatives for decommissioning raised through the scoping process for this and other projects must be addressed in the EIS, including alternatives to cable decommissioning that remove all cables, etc. rather than decommissioning buried cables in-place, although BOEM has simply ignored these alternatives in the past.

To comply with NEPA, a EIS for the Revolution Wind project must include the following information:

- 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?

As RODA has pointed out in previous comment letters, if no further NEPA review of the project decommissioning will occur in the future, the EIS must contain explicit details of proposed decommissioning activities and a reasonable range of alternatives to them. Otherwise, this project would

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<sup>39</sup> 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/>.

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, as the risk to safety for the fishing industry may remain even after an OSW project is decommissioned. The EIS should include descriptions of 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.

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 EIS. 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%.<sup>40</sup> 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.

BOEM must also provide information regarding the economic considerations of decommissioning. In a recent paper, the cost to decommission a 500 MW OSW development was estimated by Adedipe & Shafiee to range from £145,313,411.69 (min) to £241,495,688.48 (max).<sup>41</sup> This is a massive cost and the ramifications of the high price to project decisions, with ensuing environmental effects, cannot be minimized in the NEPA process. 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.<sup>42</sup> The regulations at 30 C.F.R. § 585.516 require developers to reserve funds for decommissioning in a separate account to make sure they can fulfill their obligations to the American public.

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 must be analyzed in the EIS. Therefore, the EIS must disclose the estimated cost of decommissioning and the amount of bonded funds as part of the comprehensive environmental review required by NEPA.

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<sup>40</sup> Kuhn et al 2005. Utgrunden Offshore Wind Farm: Results of 5 years of operation and research. Copenhagen Offshore Wind.

<sup>41</sup> 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>.

<sup>42</sup> Smith G., Garrett C., & Gibberd G. Logistics and Cost Reduction of Decommissioning Offshore Wind Farms. DNV GL. Presented at EWEA Offshore 2015, Copenhagen (March 2015).

## I. Project Schedule and Details

The Revolution Wind COP states an assumption that “all state and federal permits will be obtained between Q1 and Q3 2023,” with construction beginning in early 2023. This timeline seems unrealistic based on current supply chain and labor limitations. Given the rapid evolution of OSW technology and expansive assurances from OSW developers to hire U.S. labor once workforce development is further evolved, the ultimate schedule will have significant ramifications for the project’s environmental and economic effects. The schedule and its relation to project decisions must be clarified.

The Revolution Wind COP anticipates up to 100 turbines of 8-12 MW. Modern generation turbine specifications could well be larger than 12 MW by the time of project contracts; if larger turbines are anticipated that information must be included in the project design envelope with a complete analysis of the differences in environmental impacts from various turbine sizes and associated materials.

## J. Compensatory Mitigation and Impact Fees

RODA and our members have repeatedly urged BOEM to coordinate, or at least require development of, an appropriate regional-scale fisheries compensatory mitigation plan. Such a plan must be an alternative for analysis in the Revolution Wind and all project EIS documents.

BOEM has never engaged the fishing community in any dialogue regarding compensation on a project-specific or cumulative scale, and there is significant uncertainty regarding BOEM’s approach to this issue. BOEM’s Best Management Practices 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,<sup>43</sup> 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.<sup>44</sup> Mitigation measures may be separate alternatives or may be included directly in the proposed action.<sup>45</sup> 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

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<sup>43</sup> *Robertson v. Methow Valley Citizen’s Council*, 490 U.S. 332, 352 (1989).

<sup>44</sup> 40 C.F.R. § 1052.14(f).

<sup>45</sup> See Memorandum for Heads of Federal Departments and Agencies from Nancy Sutley, Chair, Council on Environmental Quality, *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact* (Jan. 14, 2011). [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_and_Monitoring_Guidance_14Jan2011.pdf).

providing substitute resources or environments.”<sup>46</sup> BOEM must consider alternatives that provide fair and complete compensatory mitigation before finalizing the DEIS.<sup>47</sup>

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. However, 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. 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.

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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, robust science, and more. Changes in one part of the system can have reverberating effects through the rest, so it is imperative, when permitting conflicting uses, that the environmental review adequately characterizes costs and benefits and presents a reasonable range of alternatives in order to maintain healthy, safe seafood production and communities.

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<sup>46</sup> 40 C.F.R. § 1508.20.

<sup>47</sup> 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.

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,

A handwritten signature in purple ink, appearing to read 'Annie Hawkins'.

Annie Hawkins, Executive Director

A handwritten signature in blue ink, appearing to read 'Fiona Hogan'.

Fiona Hogan, Research Director

A handwritten signature in blue ink, appearing to read 'Lane Johnston'.

Lane Johnston, Programs Manager

*Responsible Offshore Development Alliance*