NEW ENGLAND FOR OFFSHORE WIND

February 25, 2021

Submitted electronically to: MARFP83C@gmail.com

RE: 83C III Draft Request for Proposals

Dear Commissioner Woodcock:

We are a diverse group of advocates, associations, and institutions eager for Massachusetts to advance a large-scale offshore wind industry as swiftly as responsible development will allow. We submit the following comments on the 83C III Draft Request for Proposals with enthusiasm for the increased scale of procurement and increased level of detail presented in the draft.

Our comments underscore a persistent need for greater specificity, stringency, and transparency in the evaluation process, to ensure Massachusetts selects and advances projects that will maximize environmental and socioeconomic benefits. Overall, we recommend increasing the points allocated for qualitative factors from 25 to 50 percent. In recognition of the potential for the selected offshore wind project(s) to transform the Commonwealth's economy and lay the foundation for an industry that will be the linchpin for our decarbonization efforts, we call for this balance between qualitative and quantitative factors to appropriately value the details that will shape the industry's interaction with our communities and environment.

Further, as detailed below, we urge you to include a clear set of baseline requirements for qualitative evaluation. While we recognize the value in leaving room for innovation, there should be a minimum threshold that every bidder is expected to meet. We appreciate your consideration of our specific recommendations and look forward to working with you to embrace the full potential of responsibly developed offshore wind power.[1]

Solicitation Schedule

Our organizations have long advocated for the advancement of large-scale offshore wind power as swiftly as responsible development allows, and we appreciate that the schedule as presented in the draft RFP reflects an intention to act quickly. We do urge that the operational deadline for projects that bid in this round be sooner than 2030, both to maintain Massachusetts' leadership as neighboring states advance large projects, and to bring the clean energy benefits to the Commonwealth as quickly as possible. We recommend a revised deadline of January 1, 2027.

[1] Responsible development of offshore wind energy is development that avoids, minimizes, and mitigates impacts to ocean wildlife and habitat, traditional ocean uses, and environmental justice communities, meaningfully engages stakeholders from the start, and uses the best available science and data to ensure science-based and stakeholder-informed decision making.

Procurement Size
Since the passage of An Act to Promote Energy Diversity in 2016, making offshore wind power central to the Commonwealth's energy future has only grown more urgent. States that followed Massachusetts to set offshore wind power goals and issue solicitations reflect this heightened potential, exceeding the Commonwealth's goal and pursuing projects that exceed ours in scale, keeping pace with advancements in technology and industry capability.

We appreciate your recognition of increased potential in raising the maximum procurement to 1,600 megawatts (MW), and recommend raising the minimum total procurement from 400 to 800 MW, whether it be from one project or multiple.

Energy Storage
Offshore wind may supply half of Massachusetts' energy by 2050. DOER should begin planning now for the optimization of these wind resources. Accordingly, we recommend that DOER increase the value of energy storage in this RFP.

Qualitative Evaluation

We appreciate the increased level of detail within this section, particularly the addition of Environmental and Socioeconomic Criteria (Appendix J). The plans and commitments that bidders contribute for qualitative evaluation will let evaluators and stakeholders know how these projects, if selected, will engage with, impact, and benefit the spaces they seek to enter. While there is great value in leaving room for innovation, we believe it to be critically important that all bidders are presented with explicit baseline requirements as to the plans they need to present and what those plans, at a minimum, must demonstrate.

Minority Economic Participation
We thank you for taking the first step of identifying expectations of a "proposed strategy to enable access to employment and opportunities for historically marginalized communities," and encourage you to build on that language by requiring bidders to provide a Diversity and Inclusion Plan. Submittal of a plan should be a threshold for eligibility in Phase 1, and 2 of the evaluation process. DOER should create the conditions for innovation and ongoing accountability, while being very clear about what a sufficient Diversity and Inclusion Plan will demonstrate.

We urge DOER to:

1. Evaluate proposals, in significant part, based on submitted plans for creating opportunities for minority and disadvantaged workers, businesses and investors. Among other features, this component of proposals should address:
    a. The respondent's plan for training and workforce development, focused on minority and disadvantaged workers.
    b. The respondent's plan to solicit business from minority and disadvantaged contractors; and
    c. The respondent's plan to solicit investment from minority and disadvantaged investors;
2. Require bidders to cooperate with the state Supplier Diversity Office and other state agencies focused on minority and disadvantaged business creation and development; and
3. Establish a process for the ongoing evaluation of commitments made in selected bids, including by requiring successful bidders to provide regular updates and statistics regarding their progress towards achieving or improving upon those commitments.

Historically, the Commonwealth's actions on offshore wind have been studied by other states. For example, our first-in-the-nation offshore wind procurement was widely imitated, starting an offshore wind race down the Atlantic coast. This time, it is Massachusetts' turn to study others. Most states procuring offshore wind have eclipsed us on the dimensions of racial equity and minority economic participation. New Jersey, New York, Virginia, and Maryland in particular should be reviewed for their actions and lessons learned.

High-Quality Employment and Work Product

To help ensure timely, cost-effective completion of high-quality projects built to meet Massachusetts' offshore wind goal, we urge the inclusion of high-quality employment and work product eligibility requirements for all bidders. Requiring a prevailing wage is one way to ensure these high-quality jobs during the construction phase of the project. Eligible bidders should also be required to participate in Project Labor Agreements (PLA) and joint labor-management training programs. PLAs are particularly important because they bring coordinated, proactive planning to complex projects, provide important benefits to local communities in terms of skills training, employment opportunities, and future workforce development, and ensure that the most productive and skilled craft labor is available to work on a project.

In addition to paying prevailing wage for construction and building service work, and participating in PLAs, we urge that bidders be required to:

- Disclose whether it and each of its contractors and subcontractors on this project, have previously contracted with a labor organization, as defined by Massachusetts General Laws, c. 150A and/or the National Labor Relations Act, Section 2, in the Commonwealth or elsewhere;
- Specify whether it and each of its contractors and subcontractors on this project participates in a state or Federally certified apprenticeship program and the number of apprentices the apprenticeship program has trained to completion for each of the last five (5) years; and
- Include any detailed plans for assuring labor harmony during all phases of the construction, development, and operation of the project.

Community Benefits and Local Supply Chain

The development of offshore wind can provide important and much-needed support to communities throughout the Commonwealth. Community benefit agreements, designed in coordination with organized labor and local community organizations, help ensure that a project's contribution to local communities is maximized and that local communities are supportive of the project. Participation in a community benefit agreement and other commitments such as local hiring, purchasing from the local supply chain, and investments in ports should be required and valued in the contract evaluation process. Ideal community benefit agreements ensure that projects support additional resiliency measures, mitigate energy burden, encourage local supply-chain development, and prioritize underserved markets. We urge you to give preference to bidders who make clear commitments to maximizing opportunities for our local workforce and port resources.

We urge DOER to evaluate proposals, in significant part, that demonstrate a good faith plan to utilize the skilled, union manufacturing supply chain that exists for supplying component parts to the offshore wind project. Proposals should include plans for engaging the US supply chain, a commitment to supplier diversity, and should address a US-based strategy for filling gaps in the existing workforce and supply chain that expands the opportunity for additional economic investment.

Research and Education
We urge DOER to encourage bidders to allocate at least 1% of the cost of the proposed project to a fund in support of Massachusetts-based offshore wind power research and education. This fund shall be administered by the Massachusetts Clean Energy Center.

Appendix J: Environmental and Socioeconomic Impact Criteria

Environmental Impacts
We applaud the addition of Appendix J, and the greater level of detail it provides. This is a helpful step toward ensuring a baseline set of expectations. We consider this essential to launching an offshore wind industry in Massachusetts with minimal negative and maximal positive impact on communities and local economies, and providing long-term benefits to wildlife. Given its importance, our recommendations aim to provide clarity on necessary requirements to ensure all selected bids are well-positioned for successful permitting.

As noted above, we call for transparency in the evaluation process, and for environmental impact mitigation plans of the highest quality be given significant weight in the selection of winning bids.

We urge you to require environmental impact mitigation plans that include, but are not limited to: explicit descriptions of best management practices, and any mitigation (on- or off-site) the bidder commits to employing, informed by the best available science that will avoid, minimize, and mitigate impacts to: wildlife, including but not limited to threatened or endangered species such as North Atlantic right whales; coastal and marine habitats and ecosystems; natural resources; benthic resources and essential fish habitat; and traditional or existing water-dependent uses. The plan should also include robust monitoring before, during, and post-construction to fully understand the potential adverse effects of development, operations, and decommissioning on fisheries, marine habitat, marine and avian wildlife species, sea turtles, bats, and terrestrial migratory birds. Commitments to adaptive management in response to monitoring results should also be included.

Bidders should be required to provide financial and technical assistance to support robust monitoring of wildlife and habitat through a minimum $10,000 per megawatt contribution to regional research on the impacts of offshore wind on wildlife and habitat to inform strategies to avoid and mitigate any adverse impacts to the marine environment, as recently required in offshore wind solicitations in New York and New Jersey. The Department of Energy Resources, in consultation with the existing Habitat and Fisheries Working Groups, shall determine how the funds will be used to advance the responsible development of the offshore wind energy industry, not necessarily the proposed project.

Analysis of environmental impact mitigation plans submitted should be based on quantitative and qualitative evaluation criteria that are developed through robust stakeholder engagement and utilize the best available science including but not limited to the following comprehensive databases: Northeast Ocean Plan (Northeast Ocean Data Portal), the Massachusetts Ocean Plan (Massachusetts Ocean Resources Information System) and the Rhode Island Ocean SAMP.

Finally, proposals should include an appropriate suite of mitigation measures for the critically endangered North Atlantic right whale as well as other protected species, tailored to the specific project site and based on the best available science, that are consistent with the Best Management Practices detailed in Attachment A. In January 2019, National Wildlife Federation, Conservation Law Foundation, and Natural Resources Defense Council reached agreement with Vineyard Wind on a set of measures, in alignment with these Best Management Practices, to mitigate the potential

adverse effects to North Atlantic right whales throughout construction and operation of their 800 MW project (Vineyard Wind Agreement) (see Attachment B). The ability to reach such an agreement demonstrates the commercial viability of such measures that are critical to protecting this treasured and vulnerable species.

With regard to the requirement that bidders demonstrate the "extent to which the project avoids, minimizes, and mitigates potential impacts of the project to cultural resources and viewsheds from the Massachusetts shoreline, including through thoughtful siting and engagement with local stakeholders," we urge you to specifically require demonstrated productive engagement of tribal stakeholders.

Environmental Justice

The greater level of detail provided in Appendix J regarding Environmental Justice impacts is another helpful step toward ensuring a baseline set of expectations. We underscore the necessity of engagement with affected communities through targeted outreach and education events, including partnerships with Environmental Justice Organizations.

In order to effectively assess the potential impacts and benefits to Environmental Justice populations, we urge you to require the inclusion of an Environmental Justice Plan to include, but not be limited to, the following:

- Description of potential impacts, both positive and negative, on Environmental Justice Populations, that includes an expanded view of cumulative impacts that considers compounding adversities creating barriers for Environmental Justice Populations in realizing the benefits of the offshore wind industry;
- Description of how the bidder will mitigate harm and create economic opportunities in Environmental Justice populations;
- Description of how the bidder will include Environmental Justice stakeholders in decision-making; and
- Any planned in-state spending that will support Environmental Justice populations by providing jobs, grants, training programs, or environmental benefit projects to address historical and cumulative impacts in economically disadvantaged communities.

Thank you for your consideration.

Sincerely,

Jennifer Benson
The Alliance for Business Leadership
Co-Chair, Massachusetts State Committee
New England for Offshore Wind

Amber Hewett
National Wildlife Federation
Co-Chair, Massachusetts State Committee
New England for Offshore Wind

ATTACHMENT A

Conservation Law Foundation National Wildlife Federation Natural Resources Defense Council

All Our Energy Association to Preserve Cape Cod Defenders of Wildlife Environmental League of Massachusetts International Fund for Animal Welfare Mass Audubon Nassau Hiking & Outdoor Club NY4WHALES Seatuck Environmental Association Southern Environmental Law Center Surfrider Foundation Whale and Dolphin Conservation Wildlife Conservation Society

Best Management Practices for North Atlantic Right Whales During Offshore Wind Energy Construction and Operations Along the U.S. East Coast

North Atlantic right whales are at a critical moment. At their current rate of decline, and in the absence of immediate conservation measures, we will lose this majestic animal within only a few decades. Their most serious threats are fishing gear entanglement, including chronic entanglement where they may drag fishing gear for months or even years, and vessel collisions, one of the leading causes of mortality for all large whales. The probability of a whale suffering a serious injury or mortality from a vessel collision significantly increases when vessels of any length travel at speeds greater than ten knots. North Atlantic right whales are also subjected to numerous stressors during their annual migration along the eastern seaboards of Canada and the United States, including significant levels of noise pollution generated by human activities. Underwater noise can mask important communication calls and reduce foraging success as well as the ability to find mates. Science tells us that such additional stressors force whales to expend extra energy, which negatively affects their health and ability to reproduce successfully. For the North Atlantic right whale to survive and recover, threats must be avoided, minimized, and mitigated to the fullest extent possible.

Our organizations strongly support development of environmentally responsible offshore wind energy along the eastern seaboard of the U.S. as a key to the critical transition away from harmful fossil fuels to a clean energy economy. Offshore wind power provides a tremendous opportunity to fight climate change, reduce local and regional air and water pollution, and grow a new industry that supports thousands of well-paying jobs. While the need for this transition is only growing more urgent, we can and must ensure that all U.S. offshore wind development is guided by science-based measures to avoid, reduce, and mitigate impacts on valuable and vulnerable wildlife, such as the North Atlantic right whale.

Our organizations endorse the measures outlined below as Best Management Practices ("BMPs") for the protection of the North Atlantic right whale during wind energy construction and operations of fixed foundation offshore wind projects off the U.S. East Coast. The BMPs are designed to: (i) reduce co-occurrence of development activities with this sensitive species; (ii) minimize and mitigate any impacts that do occur to the maximum extent practicable, including the prevention of any injury to right whales during construction; (iii) reduce risk of vessel collisions throughout the life of an offshore wind project; and (iv) ensure effective long-term monitoring of the health of marine life present at an offshore wind site to help guide the development of the American offshore wind industry. The below measures are intended to ensure that we can advance imperative, large-scale clean energy solutions while conserving

the health of this iconic whale species. Note that as the science, technology, and regulations related to right whale protection and offshore wind power advance, our groups will periodically reexamine and update these BMPs.

1. Site selection

   Offshore wind projects should not be sited in, at minimum, federally designated North Atlantic right whale critical habitat, as defined under the Endangered Species Act, until: (i) peer-reviewed scientific research determines that offshore wind activities are not likely to jeopardize the continued existence of North Atlantic right whales or adversely modify their habitat; and (ii) research informs the development of comprehensive mitigation measures. However, understanding that designated critical habitat may not include all important foraging, calving, and migratory areas for right whales, care should be taken when siting to avoid and minimize use of areas with consistent seasonal right whale aggregations.

2. Seasonal and temporal restrictions on construction

   Construction activities, including any geophysical surveys necessary to advise final micro-siting decisions, with noise levels that could cause injury or harassment in marine mammals must not occur during periods of highest risk to North Atlantic right whales, defined as times of highest relative density of animals during their migration, and times when mother-calf pairs, pregnant females, surface active groups (indicative of breeding or social behavior), or aggregations of three or more whales (indicative of feeding or social behavior) are, or are expected to be, present, as supported by review of the best available science at the time of development.

   Pile driving and geophysical survey activities should commence, with ramp-up, only during daylight hours and good visibility conditions to maximize the probability that North Atlantic right whales are detected and confirmed clear of the exclusion zone before these activities begin (*see* also 3, below). The activity can then continue into nighttime hours. If the activity is halted or delayed because of documented or suspected North Atlantic right whale presence in the area, developers must wait until daylight hours and good visibility conditions to recommence.

3. Monitoring exclusion zones during construction

   For the North Atlantic right whale, a minimum exclusion zone of 1,000 meters should be established around all vessels conducting activities with noise levels that could result in injury or harassment to this species (*e.g.*, pile driving and geophysical surveys). The size of the exclusion zone should be extended during periods of highest risk to right whales. The activity must be halted or delayed if a North Atlantic right whale is detected in the exclusion zone unless it must proceed for human safety reasons or because, in certain cases, stopping the pile installation mid-way through would result in an unusable turbine foundation.

   To maximize the probability of detection of North Atlantic right whales, comprehensive exclusion zone monitoring is essential. At minimum, a combination of National Marine Fisheries Service ("NMFS") approved Protected Species Observers ("PSOs") to watch for whale presence and passive acoustic monitoring with underwater recorders located in proximity to the exclusion

zone to detect when animals are vocalizing nearby should be required at all times. Staffing and shift-schedules should allow for each PSO to monitor a maximum of 180° during daylight hours. Aerial surveys would also provide a useful supplement to increase detection probability. At night, a combination of night-vision, thermal imaging, and passive acoustic monitoring should be used.

4. Vessel speed restriction for the lifetime of the project

   All vessels operating within or transiting to/from lease areas should observe a speed restriction of ten knots during times when mother-calf pairs, pregnant females, surface active groups, or aggregations of three or more whales are, or are expected to be, present based on best available science. A compulsory vessel speed restriction of ten knots must be required of all industry vessels within any Dynamic Management Area ("DMA") established by NMFS. Crew transfer vessels may exceed a speed of ten knots only if additional monitoring measures are in place, including aerial surveys or a combination of vessel-based visual observers and passive acoustic monitoring. Any collision should be reported immediately following NMFS guidelines.

5. Reduction of underwater noise during construction

   During construction, developers should commit to minimizing impacts of underwater noise on the North Atlantic right whale to the full extent feasible through: (i) the consideration and use of foundation types and installation methods that eliminate or reduce noise; and (ii) the use of technically and commercially feasible and effective noise reduction and attenuation measures, including the use of the lowest practicable source level.

6. Commitment to scientific research and long-term monitoring

   Developers should commit to carrying out scientific research and long-term monitoring in lease areas to advance understanding of the effects of offshore wind development on marine and coastal resources, and the effectiveness of mitigation technologies (*e.g.*, noise attenuation and thermal detection). Science should be conducted in a collaborative and transparent manner, utilizing recognized marine experts, engaging relevant stakeholders, and making results publicly available. Developers should coordinate with state and regional scientific efforts to ensure results from individual lease areas can be interpreted within a regional context and contribute to the generation of regional-scale data, which is required to address questions related to population-level change and cumulative impacts across the geographic range of the North Atlantic right whale. Developers should engage in regional and state ocean planning efforts and contribute scientific analysis and data as appropriate, including contributions to the regional ocean data portals.

7. Contribution to species conservation efforts

   As a broad commitment to species conservation efforts, offshore wind developers should support mitigation approaches and strategies to reduce other stressors facing potentially affected species such as the critically endangered North Atlantic right whale (*e.g.,* incidental entanglement in fishing gear).

This is an exciting moment for offshore wind energy development along our Atlantic coast. Several states have adopted ambitious offshore wind goals, with a combined total of over 15,000 MW committed by 2035. Many large-scale offshore wind projects are now advancing through the permitting process and are expected to be built off the East Coast over the next ten years, providing enough clean renewable electricity to power at least 5 million homes. These protective measures will help advance the offshore wind energy industry in a responsible manner that protects vulnerable North Atlantic right whales, and we call on all developers to adopt them as they design, build, and operate offshore wind turbines in U.S. waters.

ATTACHMENT B

Vineyard Wind – NGO Agreement
January 22, 2019

This Agreement dated as of January 22, 2019, is made by and between VINEYARD WIND, LLC ("Vineyard Wind"), which has its principal place of business at Suite 510, Bank Plaza, 700 Pleasant Street, New Bedford, MA 02740, the NATIONAL WILDLIFE FEDERATION, the NATURAL RESOURCES DEFENSE COUNCIL, and the CONSERVATION LAW FOUNDATION (the "NGOs") (collectively the "Parties").

WHEREAS, the Parties are united in the belief that responsibly developed offshore wind power has a major role to play in America's energy future;

WHEREAS, the Parties recognize that wind energy does not have the negative climate effects of carbon emissions from other generation sources, and wind power thus helps to ameliorate impacts like ocean acidification, loss of sea ice, sea level rise, more extreme weather, and many other climate effects;

WHEREAS, the Parties are committed to working together to ensure that the development of much-needed wind electricity generation capacity off the nation's coasts will occur in a manner that avoids, minimizes, and mitigates adverse impacts on the health of our coastal and marine wildlife;

WHEREAS, the development of offshore wind energy provides a unique opportunity for offshore wind developers to collaborate with academic research institutions, government, environmental organizations, ocean user groups and other stakeholders to advance scientific research that enhances protections for the critically endangered North Atlantic right whale, including research on the effects, if any, of wind farm operations on right whale distribution and habitat use;

WHEREAS, Vineyard Wind is committed to developing offshore wind power projects in the U.S. with robust standards of environmental protection during pre-development, construction, and operations and maintenance activities, while making a meaningful contribution to science that can support the responsible development of America's vast offshore wind resources;

WHEREAS, the protection of the North Atlantic right whale is a top priority, the Parties recognize and agree that protective actions set forth herein must be done in a manner that ensures human health and safety when working in the offshore environment;

WHEREAS, while this Agreement pertains to protections for the North Atlantic right whale specifically, the Parties agree that the measures set forth herein may also provide additional protections to other marine mammals and protected species;

WHEREAS, this agreement is intended to serve as a model for similar agreements pertaining to offshore wind projects along the East Coast;

WHEREAS, the Parties agree that the commitments made herein apply specifically and solely to Vineyard Wind's first 800 MW project located in the northern portion of the lease area OCS-A-501 (the "Project Area"), and as more fully described in the Construction and Operations Plan submitted to the Bureau of Ocean Energy Management ("BOEM") dated December 19, 2017, as supplemented thereafter (the "Project").

NOW THEREFORE, in consideration of the foregoing the Parties agree as follows:

I. Protective Measures for North Atlantic Right Whales

Vineyard Wind agrees to implement the following measures for responsible offshore wind development in constructing and operating the Project.

A. Construction Activities

Table 1. Seasonal Restrictions on Pile Driving Activities

Timeframe	Mitigation Protocol
Red Period: January 1 – April 30	No pile driving
Yellow Period: November 1 – December 31; May 1 – 14	Enhanced mitigation protocol required
Green Period: May 15 – October 31	Comprehensive monitoring / clearance zone protocol required

1. Red Period: No Pile Driving

During this period of most likely presence of North Atlantic right whales, as specified in Table 1, no pile driving shall occur.

2. Yellow Period: Enhanced Mitigation Protocol for Pile Driving

During the times of likely presence of North Atlantic right whales, as specified in Table 1, an Enhanced Mitigation Protocol will be implemented during each day that pile driving is scheduled to take place. This will include:

a) Pile driving shall not be initiated at night or when the clearance zone cannot be visually monitored, as determined by the lead Protected Species Observer (hereafter, "PSO")[1] on duty. Pile driving may continue after dark only if the action began during the day and must proceed for human safety or installation feasibility[2] reasons;

b) A clearance zone for North Atlantic right whales shall extend 10,000 meters in all directions from the center of the pile. Pile driving activities shall not be initiated when there is either a visual observation or acoustic detection of one or more North Atlantic right whales within the clearance zone through (i.), (ii.), or (iii.) of this section, and shall be shut-down under either of these circumstances unless it must proceed for human safety or installation feasibility reasons.

i. Real-time passive acoustic monitoring ("PAM")[3], assuming a detection range of 10,000 meters, shall be undertaken from a vessel other than a pile driving vessel, or from a stationary unit, to avoid the hydrophone being masked by the pile driving vessel or development-related noise and to ensure that the clearance zone is clear of North Atlantic right whales. PAM shall begin at least 60 minutes prior to commencement of pile driving and shall be conducted throughout the time of pile driving activity; and

ii. There shall be vessel-based PSOs stationed at the pile driving site. There shall be a minimum of four PSOs following a two-on, two-off rotation, each responsible for scanning no more than 180° per pile driving event. Observation shall begin at least 60 minutes prior to the commencement of pile driving and shall be conducted throughout the time of pile driving activity; and

iii. Between May 1 – 14, a track-line survey fully covering the clearance zone to detect the presence of North Atlantic right whales must be completed prior to commencement of pile driving using at least one of the following methods:

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[1] PSO refers to an individual with current National Marine Fisheries Service ("NMFS") certification as a Protected Species Observer.

[2] Installation feasibility refers to ensuring that the pile installation event results in a usable foundation for the wind turbine (*e.g.*, installed to the target penetration depth without refusal and with a horizontal foundation/tower interface flange). In the instance where pile driving is already started and a PSO recommends pile driving be halted, the lead engineer on duty will evaluate the following: 1) Use the site-specific soil data and the real-time hammer log information to judge whether a stoppage would risk causing piling refusal at re-start of piling; and 2) Check that the pile penetration is deep enough to secure pile stability in the interim situation, taking into account weather statistics for the relevant season and the current weather forecast. Determinations by the lead engineer on duty will be made for each pile as the installation progresses and not for the site as a whole. This information will be included in the reporting for the Project.

[3] Throughout this agreement "PAM" refers to a real-time passive acoustic monitoring system, with equipment bandwidth sufficient to detect the presence of vocalizing North Atlantic right whales.

- An aerial survey, weather permitting (based on safe flying conditions), conducted once the lead aerial observer[4] determines adequate visibility based on standardized environmental parameters (*e.g.*, glare, sea state, wind speed, etc.); or
- A vessel-based survey carried out by PSOs conducted during daylight hours.

c) Pile driving may resume upon confirmation that all North Atlantic right whales have departed the clearance zone:

i. May 1 – 14: after one day of monitoring using methods described in (b.i.), (b.ii.), and (b.iii.) of this section.

ii. November 1 – December 31: methods listed under (b.i.) and (b.ii.) of this section may be used by the lead PSO on duty to confirm that the whales have departed the 10,000 meter zone; if so, piling may commence following observance of the clearance zone monitoring protocol described in (b.i.) and (b.ii.).

3. Green Period: Comprehensive Monitoring / Clearance Zone Protocol for Pile Driving

During this period of less likely presence of North Atlantic right whales, as specified in Table 1, a Comprehensive Monitoring / Clearance Zone Protocol will be implemented during each day that pile driving is scheduled to take place. This will include:

a) Pile driving shall not be initiated at night or when the clearance zone cannot be visually monitored, as determined by the lead PSO on duty. Pile driving may continue after dark only if the action began during the day and must proceed for human safety or installation feasibility reasons; and

b) A clearance zone for North Atlantic right whales shall extend a minimum of 1,000 meters in all directions from the center of the pile. Pile driving activities shall not be initiated when there is either the visual observation or acoustic detection of one or more North Atlantic right whales within the clearance zone through (i.) and (ii.) of this section and shall be shut down under either of these circumstances unless it must proceed for human safety or installation feasibility reasons. If a shut-down is implemented, pile driving may resume upon confirmation that all North Atlantic right whales have departed the clearance zone after 60 minutes of monitoring through (i.) and (ii.) of this section.

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[4] The lead aerial observer shall be selected from a roster of qualified lead aerial observers who are available for duty with 12 hours' notice. This roster to be provided by either the New England Aquarium, the Center for Coastal Studies, National Oceanic and Atmospheric Administration ("NOAA"), or other organizations recommended by the organizations listed in this sentence. The Project will use only observers from this roster to the extent they are available at the time needed to perform the monitoring.

i. Real-time PAM will be implemented at least 60 minutes prior to pile driving. PAM will be undertaken from a vessel other than the pile driving vessel, or from a stationary unit, to avoid the hydrophone being masked by the pile driving or other development-related noise; and

ii. There shall be a minimum of four PSOs stationed at the pile driving site, following a two-on, two-off rotation, each responsible for scanning no more than 180° per pile driving event. Observation will begin at least 60 minutes prior to the commencement of pile driving and shall be conducted throughout the period of pile driving activity.

4. Installation of Jacket Foundations

No more than two jacket foundations will be installed.

B. Geophysical Surveys During Construction and Post-Construction

This section does not refer to any geophysical surveys carried out as part of site assessment and characterization ("SAC") stage of offshore wind development. The Parties believe further discussion is necessary to agree upon feasible protocols for SAC surveys that would allow Vineyard Wind to meet BOEM geophysical survey requirements.

Table 2. Seasonal Restrictions on Geophysical Surveys During Construction and Post-Construction

Timeframe	Mitigation Protocol
Red Period: January 1 – May 14	No geophysical surveys with RMS sound pressure levels > 180 dB re 1 uPa at 1 meter for equipment that operates between 7 Hz and 35 kHz unless with Enhanced Mitigation Protocol
Green Period: May 15 – December 31	Comprehensive monitoring / clearance zone protocol required

1. Red Period: No Surveys or Surveys with Enhanced Mitigation Protocol

During this period, as specified in Table 2, no surveys with RMS sound pressure levels > 180 dB re 1 uPa at 1 meter for equipment that operates between 7 Hz and 35 kHz shall occur. An exception can be made for infrequent geophysical surveys that are essential during the construction and micro-siting of the Project to ensure proper installation or maintenance of the Project post-construction. In these instances, the following enhanced mitigation protocol shall be implemented:

a) A clearance zone for North Atlantic right whales shall extend 1,000 meters in all directions from the survey vessel;

b) Surveys shall not be initiated at night or when there is either a visual observation or an acoustic detection (confirmed by visual observation) of one or more North Atlantic right whales within the clearance zone and shall be shut down under either of these circumstances. After daylight hours, surveys shall be shut down following an acoustic detection only. Observation and PAM shall begin at least 60 minutes prior to commencement of the survey and shall be conducted throughout the period of the survey activity. Surveying may resume upon confirmation that all North Atlantic right whales have departed the clearance zone after 60 minutes of both visual and acoustic monitoring; and

i. Real-time PAM shall be undertaken in a manner that avoids masking of the North Atlantic right whale vocalizations by vessel noise, including use of a system that is independent from the survey vessel if necessary; and

ii. There shall be a minimum of four PSOs following a two-on, two-off rotation, each responsible for scanning no more than 180°.

c) Survey equipment will commence following a ramp-up procedure and will be operated at the lowest source level feasible to meet survey requirements.

2. Green Period: Comprehensive Monitoring / Clearance Zone Protocol for Surveys

During this period, as specified in Table 2, a Comprehensive Monitoring/ Clearance Zone Protocol will be implemented during all surveys with RMS sound pressure levels > 180 dB re 1 uPa at 1 meter for equipment that operates between 7 Hz and 35 kHz. This will include:

a) A clearance zone for North Atlantic right whales shall extend 500 meters in all directions from the survey vessel and, to the extent feasible, shall be extended to 1,000 meters;

b) Surveys shall not be initiated when there is either a visual observation or an acoustic detection of one or more North Atlantic right whales within the clearance zone and shall be shut down under either of these circumstances. After daylight hours, surveys shall be shut down following an acoustic detection only. Visual and acoustic surveys shall begin at least 30 minutes prior to commencement of survey activity and shall be conducted throughout the period of the activity. Surveying may resume upon confirmation that all North Atlantic right whales have departed the clearance zone after 30 minutes of visual or acoustic monitoring; and

i. Real-time PAM shall be undertaken in a manner that avoids masking of the North Atlantic right whale vocalizations by vessel noise, including use of a system that is independent from the survey vessel if necessary; and

ii. The clearance zone shall be monitored by at least one PSO and at least two PSOs if feasible.

c) Survey equipment will commence following a ramp-up procedure and will be operated at the lowest source level feasible to meet survey requirements.

C. Vessel Speed Restrictions

All Project-associated vessels shall adhere to the following speed restrictions:

1. A mandatory speed restriction of 10 knots shall be observed within Dynamic Management Areas ("DMAs") established by National Oceanic and Atmospheric Administration ("NOAA") Fisheries, with the exception of crew transfer vessels.[5]

2. A mandatory speed restriction of 10 knots shall be observed within DMAs established by NOAA Fisheries by crew transfer vessels, unless the following procedures result in confirmation that the North Atlantic right whales are clear of the transit route and Project Area for two consecutive days:

   (a) Vessel based surveys carried out by PSOs conducted during daylight hours and real-time PAM shall be undertaken, in a manner that avoids masking of the North Atlantic right whale vocalizations by vessel noise; or

   (b) An aerial survey, weather permitting (based on safe flying conditions), conducted once the lead aerial observer[6] determines adequate visibility based on standardized environmental parameters (*e.g.*, glare, sea state, wind speed, etc.) and real-time PAM shall be undertaken, when feasible, in a manner that avoids masking of the North Atlantic right whale vocalizations by vessel noise.

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[5] A crew transfer vessel is a vessel whose principle purpose is to transfer technicians who work offshore, and the supplies and small-scale components used by these technicians, to and from a port facility and their offshore work location.

[6] The lead aerial observer shall be selected from a roster of qualified lead aerial observers who are available for duty with 12 hours' notice. This roster to be provided by either the New England Aquarium, the Center for Coastal Studies, NOAA, or other organizations recommended by the organizations listed in this sentence. The Project will use only observers from this roster to the extent they are available at the time needed to perform the monitoring.

(c) Following clearance from C. 2. (a.) and (b.), vessel transits conducted within a DMA will employ at least two observers[7] aboard the vessel to visually monitor for North Atlantic right whales. If a North Atlantic right whale is spotted within or approaching the transit route, vessels shall operate at less than 10 knots until the procedures in C. 2. (a.) and (b.) result in clearance of the transit route for two consecutive days.

3. From November 1 through May 14:

(a) A 10-knot speed restriction shall be observed by all vessels, with the exception of crew transfer vessels operating within and transiting to/from the lease area and vessels operating in Nantucket Sound (which has not been demonstrated by best available science to provide consistent habitat for North Atlantic right whales).

(b) A 10-knot speed restriction shall be observed by crew transfer vessels operating within and transiting to/from the Project Area (except while in Nantucket Sound, which has not been demonstrated by best available science to provide consistent habitat for North Atlantic right whales) unless the following measures are in place:

i. At least one observer,[8] and two when personnel are available, aboard the vessel to visually monitor for North Atlantic right whales; and

ii. Real-time PAM shall be undertaken in a manner that avoids masking of the North Atlantic right whale vocalizations by vessel noise.

iii. If a North Atlantic right whale is detected as a result of the monitoring measures identified in (i.) and/or (ii.) of this section, a 10-knot speed restriction shall be in effect for the remainder of the day.

(c) To the extent that a DMA occurs between November 1-May 14 the provisions in C. 1. and 2. apply.

D.Reporting

Vineyard Wind commits to report all visual observations and acoustic detections of vocalizing North Atlantic right whales to the National Marine Fisheries Service ("NMFS") or the Coast Guard within two hours of occurrence when feasible and no later than the end of their shift.

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[7] During construction the observers shall be NMFS certified PSOs. During Project operations and maintenance, the observers shall have North Atlantic right whale observer training provided by a company utilized by NMFS for PSO training or recommended by the organizations listed in in footnote 6. Two individuals shall be designated during each vessel trip to conduct monitoring.

[8] See footnote 7.

E. Underwater Noise Reduction

Vineyard Wind is committed to employing technically and commercially feasible noise reduction and attenuation measures that minimizes impacts to North Atlantic right whales and other high-priority species. Vineyard Wind will implement attenuation mitigation to reduce sound levels by a target of 12 dB. A noise attenuation technology will be implemented (*e.g.*, Noise Mitigation System [NMS], Hydro-sound Damper [HSD], Noise Abatement System [AdBm], bubble curtain, or similar), and a second back-up attenuation technology (*e.g.*, bubble curtain or similar) will be on-hand, to be used if needed given results of field verification. For the Project, Vineyard Wind will not request Level A takes of a North Atlantic Right Whale. Vineyard Wind will inform and receive input from the other Parties as it identifies noise attenuation measures and technologies to be used for the Project.

F. Additional Mitigation Strategies

In addition to the above measures designed to avoid and minimize impacts to North Atlantic right whales, Vineyard Wind commits to considering other mitigation approaches aimed at overall species protection.

II. Commitment to Collaborative Science

Vineyard Wind has made a $3 million commitment to develop and deploy technologies that ensure heightened protections for North Atlantic right whales and other marine mammals as the U.S. offshore wind industry continues to grow. Vineyard Wind commits to implement the following principles when undertaking marine science and science-based conservation efforts:

A. Plan and conduct science and science-based conservation efforts in a collaborative and transparent manner, utilizing recognized marine experts, engaging relevant stakeholders, and making results publicly available;

B. Contribute to the field of marine science and make efforts to address the priorities defined by regional and state ocean planning efforts; and

C. Advance understanding of the effects of offshore wind development on marine and coastal resources, the effectiveness of mitigation measures (*e.g.*, noise attenuation, thermal detection), and strategies to reduce other stressors facing affected species (*e.g.*, incidental fishing gear entanglement reduction), such as the North Atlantic right whale.

III. Inclusion of Protective Measures in Agency Submittals

Where Vineyard Wind seeks state and federal authorizations to conduct Project activities that may potentially affect the North Atlantic right whale, Vineyard Wind agrees to propose mitigation strategies

consistent with the protective measures set forth herein as they relate to the activity for which authorization is sought. Vineyard Wind will also inform the relevant state and federal agencies of Vineyard Wind's voluntary commitments under this Agreement. To the extent that a state or federal agency declines to adopt, for regulatory purposes, a protective measure specified herein, Vineyard Wind will nevertheless implement the measure provided it does not conflict with regulatory requirements.

IV. Modeling and Adaptive Management

The intent of this agreement is to minimize disruption of normal feeding, breeding and migratory behaviors and prevent injury to right whales. The mitigation measures of this Agreement aim to lower risk from injury to a level approaching zero and to reduce other effects caused by marine noise significantly below that estimated in BOEM's December 2018 Draft Environmental Impact Statement ("DEIS") for Vineyard Wind. The Parties' expectation is that the mitigation measures included in this agreement will meet these goals. To confirm this before construction, Vineyard Wind agrees to re-run and share with the Parties its piling noise exposure model to incorporate the execution of mitigation measures in this Agreement and the Project parameters (*e.g.*, number of monopiles, number of jackets) planned to actually be built (as opposed to the permitting envelope analyzed in the DEIS). Should the revised modeling not demonstrate that impacts from construction are reduced to the levels described in this paragraph, the Parties will consider additional mitigation measures.

While this Agreement applies only to Vineyard Wind's 800 MW project located in the northern portion of the lease area OCS-A-501, the Parties recognize that Vineyard Wind intends to propose future projects. In a good faith effort to continue to work collaboratively and evaluate lessons learned from the Project subject to this Agreement, every two years, or if one of the Parties so requests, the Parties agree to review the scientific data on the occurrence, abundance, habitat use, and conservation status of North Atlantic right whales, particularly in the vicinity of the Project Area, along with any other relevant data, including information on new noise attenuation and monitoring technologies or practices that have become available. This review will inform future projects and agreements between the Parties. To the extent that new protective measures are identified relevant to this Project, Vineyard Wind agrees to evaluate their technical and commercial feasibility and implement them if appropriate.

V. Dispute Resolution

In the event of a dispute among the Parties concerning implementation of or compliance with any aspect of this Agreement, the initiating Party or Parties shall provide the other Party or Parties with a written notice outlining the nature of the dispute and the remedy that is sought. The Parties shall meet and confer, either in person or over the telephone, to work in good faith to attempt to resolve the dispute, including by modification of the agreement if all Parties agree. If agreement on the appropriate resolution of the dispute cannot be reached, the Parties reserve their right to withdraw from the agreement as a last resort.

VI. Term of Agreement

The Parties agree that the protective measures set forth herein will remain in place for five years unless extended or modified by mutual agreement of the Parties.

[SIGNATURE PAGE TO FOLLOW]

Vineyard Wind, LLC

By: _____

Name: Erich Stephens
Chief Development Officer

Date: January 22, 2019

Natural Resources Defense Council

By: _____

Name: Katherine Kennedy
Senior Director, Climate & Clean Energy Program

Date: January 22, 2019

National Wildlife Federation

By: _____

Name: Collin O'Mara
President & Chief Executive Officer

Date: January 22, 2019
NWF ID: 1901-041

Conservation Law Foundation

By: _____

Name: Priscilla Brooks, Ph.D.
Vice President and Director of Ocean Conservation

Date: January 22, 2019