Equinor Wind US Fisheries Communication Plan

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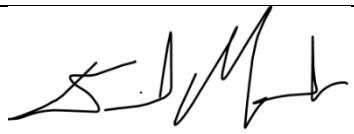
Renewables US Public Affairs – David Marks	**9/2/21**	

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1 Introduction

This Fisheries Communication Plan (FCP) has been developed to present the proposed approach for Equinor Wind US, LLC (Equinor) (previously known as Statoil Wind US LLC, or Statoil) to liaise and consult with the fishing industry in relation to the development of such offshore wind energy areas and their associated cable routes and landfall sites.

Joint Ventures between Equinor and bp have been formed to develop the following Bureau of Ocean Energy Management (BOEM) offshore lease areas:

- Empire Wind - OCS-A 0512 (executed April 1, 2017) and
- Beacon Wind - OCS-A 0520 (executed April 1, 2019).

Equinor assigned Empire Wind to Empire Offshore Wind, LLC (Empire) and Beacon Wind to Beacon Offshore Wind, LLC (Beacon) in accordance with BOEM's requirements. In 2020, Equinor and bp entered into a 50-50 partnership for Empire Wind and Beacon Wind. Empire and Beacon are Joint Ventures between Equinor and BP, whereas Equinor is the operating partner.

The Empire Wind Lease Area is positioned such that an offshore wind project can supply power to New York. The Beacon Wind Lease Area is positioned such that it can supply power to Massachusetts, Connecticut, Rhode Island, New York, and/or New Jersey. Both the Empire Wind Lease Area and Beacon Wind Lease Area (the Projects) can support more than one wind project.

This document will be updated and will evolve in consultation with the fishing industry as the development of the lease areas mature and draws upon Equinor's offshore wind experience in Europe. The FCP has been produced for stakeholders from the fishing industry and is intended to provide clarity on Equinor's delivery objectives and its approach to liaise and interact with the fishing industry. Equinor has also developed Fisheries Mitigation Plans (FMPs), which will be available on its website, www.empirewind.com/fisheries and www.beaconwindwind.com/fisheries. The FMP will also be updated as the development for each of the wind farm projects matures and based upon feedback from the agencies.

1.1 Background

Offshore wind energy procurements are led at the state level. The following provides background on offshore renewable energy initiatives for each of the states in which the Projects could provide power to. The development of the OCS-A 0512 and OCS-A 0520 lease areas are expected to make a significant contribution towards achieving these targets.

New York Offshore Wind Initiatives

In 2014, Governor Andrew M. Cuomo launched New York's energy policy, 'Reforming the Energy Vision'. The associated State Energy Plan set a goal for 50% of electricity consumed in the State of New York to come from renewable sources by 2030. Offshore wind has the potential to be the most significant renewable energy resource available in the southeast portion of the state, where currently only a small proportion of renewable energy is being generated and consumed. In January of 2017, Governor Andrew M. Cuomo committed to develop up to 2.4 gigawatts of offshore wind by 2030. In January 2019, the target was increased to 9.0 GW by 2035. The first competitive solicitation took place in 2018. The second solicitation took place in 2020.

New Jersey Offshore Wind Initiatives

In January 2018, Governor Phil Murphy signed Executive Order No. 8, which directs the NJ Board of Public Utilities to implement the Offshore Wind Economic Development Act including 3.5 GW of offshore wind by 2030. In November 2019, Governor Phil Murphy signed Executive Order No. 92 increasing this goal to 7.5 GW of offshore wind by 2035. The first competitive solicitation took place in 2018. The second solicitation took place in 2020.

Massachusetts Offshore Wind Initiatives

In 2016, Governor Charlie Baker signed an energy bill, the Act Relative to Energy Diversity (H. 4568) that requires Massachusetts electricity distribution companies to procure 1,600 MW of offshore wind energy by June 2027. The first competitive solicitation took place in 2017. The second competitive solicitation took place in 2019. The third solicitation took place in 2021.

Connecticut Offshore Wind Initiatives

In 2019, Governor Ned Lamont signed An Act Concerning the Procurement of Energy Derived from Offshore Wind that authorizes the State of Connecticut to purchase up to 2,000MW or equivalent of 30 percent of the state load of offshore wind. Subsequently, a competitive solicitation took place later that year.

Rhode Island Offshore Wind Initiatives

In 2016, Rhode Island became the first State to host an offshore wind project in the United States (Block Island Wind Farm). In 2017, Governor Gina Raimondo introduced a goal to increase Rhode Island's clean energy to 1,000 MW by 2020. In 2018, a competitive solicitation took place for long-term contracts for renewable energy that resulted in additional offshore wind being sourced to meet Rhode Island's renewable energy demand.

1.2 Regulatory Framework

The Projects are conducting early stage activities including: site characterization surveys, stakeholder engagement and securing the necessary permits and licenses required to construct and operate utility scale offshore wind farm(s).

The first step in the Projects' permitting process is to develop and submit to BOEM a Site Assessment Plan (SAP). BOEM requires the SAP to describe the initial activities necessary to characterize a lease site. This includes for example, wind resource measurements using meteorological masts or buoys, and/or meteorological and oceanographic (metocean) data collection, as well as any requirements for testing new technology that makes contact with the seabed. The SAP for OCS A-0512 has been approved by BOEM and is located: https://www.boem.gov/renewable-energy/state-activities/lease-ocs-0512 and the SAP for OCS A-0520 is being prepared. The meteorological buoys were decommissioned in November 2020.

The next phase is the development of the Construction and Operations Plan (COP). The COP describes all the activities necessary for the construction, operation, and decommissioning of proposed offshore wind farm(s) on the lease. As part of the COP approval process, BOEM must ensure that any activities approved are safe, minimize impacts to natural resources on the Outer Continental Shelf (OCS), are undertaken in coordination with relevant Federal agencies, provide a fair return to the United States, and are compliant with all applicable laws and regulations (30 CFR § 585.102). The National Environmental Protection Act (NEPA) requires the preparation of an Environmental Impact Statement (EIS) for any major federal action significantly affecting the quality of the human environment. The COP outlines the environmental, social and technical information needed for BOEM to undertake the EIS as part of its review. As part of the EIS, a wide range of potentially affected receptors, identified through stakeholder engagement and scoping, will form part of the detailed process of information gathering, site investigations, site specific environmental surveys, stakeholder engagement and impact assessments that will inform the federal and state environmental review processes.

While Outer Continental Shelf Lands Act (OCSLA) is the primary federal authority governing regulatory driver for the development of a renewable energy facility within the lease areas, several other federal, state, and local agencies also have regulatory authority over the wind farm project(s), given the locations of the wind farm project(s) components. The specific state permits vary, and therefore, will be predicated by the underlying regulations and activities being proposed by the Projects. The primary state approvals will be associated with the portion of the facilities located within the state boundary (i.e., 3 nautical miles offshore) associated with the designated point of interconnection (e.g., export cable, onshore substation and interconnection cable). Additional state jurisdiction may be relevant based on the proposed activities and potential for coastal zone consistency to come into play. Lastly, additional approvals will likely be necessary from the municipalities in which construction activities are proposed.

1.3 Empire Wind OCS-A 0512 Lease Area

The 0512 Lease Area was originally proposed September 2011, as the result of an unsolicited request to the Bureau of Ocean Energy Management (BOEM) from the New York Power Authority (NYPA), Long Island Power Authority (LIPA) and ConEd, for a commercial lease. In June 2012 the area was modified to expand the buffer between shipping lanes and proposed wind turbines from one-quarter nautical mile to one nautical mile. In January 2013, BOEM issued a 'Request for Interest' seeking public comments on the proposal, followed by a 'Call for Information and Nominations' in May 2014 seeking public comments on the development authorization process. In December 15 – 16, 2016, BOEM conducted an auction for the lease, which concluded with Statoil as the successful bidder. Statoil signed the commercial wind energy lease OCS-A 0512 on March 15, 2017 and the lease was executed April 1, 2017. Statoil has since been renamed 'Equinor.' Equinor assigned Empire Wind to Empire Offshore Wind, LLC (Empire) in accordance with BOEM's requirements. In 2020, Equinor and bp entered into a 50-50 partnership for Empire Wind, which is a Joint Venture between Equinor and bp whereas Equinor is the operator.

The Empire Wind lease area extends 14 to 30 miles southeast of Long Island, spanning 79,350 acres, in water depths between 65 and 131 feet or approximately 10 to 22 fathoms (see Table 1.1, Table 1.2 and Figure 1.1). Subject to environmental and technical constraints, which are being explored as part of the design and development phases, with a potential generating capacity of approximately 2 GW. Empire plans to build out the Lease Area in up to two phases. The Empire Wind 1 (EW 1) Project is an 816 MW project that was selected as a winning bidder in New York State's competitive solicitation for Offshore Wind Renewable Energy Credits (ORECs) in 2019. The Empire Wind 2 (EW 2) Project is a 1260 MW project that was selected as a winning bidder in New York State's competitive solicitation for Offshore Wind Renewable Energy Credits (ORECs) in 2021.

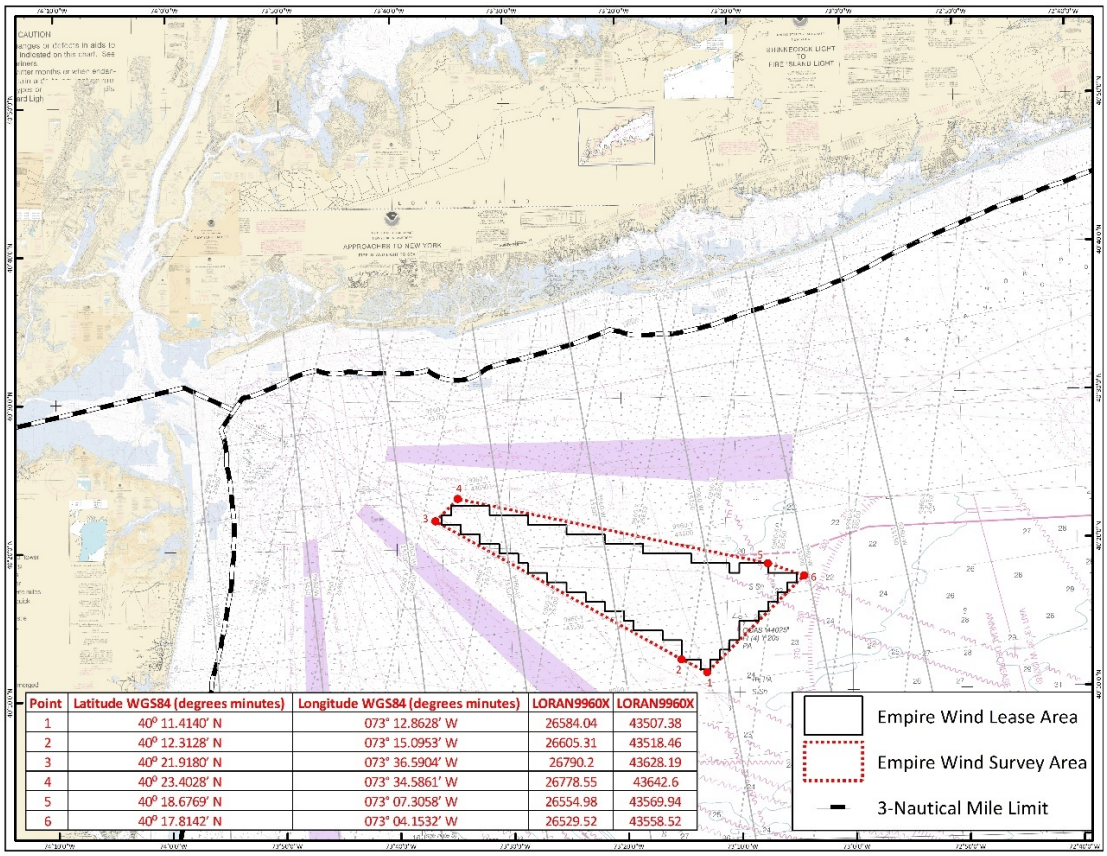
The OCS-A 0512 lease area has water depths suitable for conventional, bottom-fixed foundations, such as monopiles, jackets or gravity base foundations. The exact details of the wind farm design and installation techniques will be determined over the coming years based on site specific data (e.g. geotechnical soil characteristics) and consultation with the fishing community.

TABLE 1 EMPIRE WIND OCS-A 0512 LEASE AREA KEY CHARACTERISTICS

Project Information	**Detail**
Size	79,350 acres
Capacity	~ 2 GW
Distance from shore	From 14 miles to 30 miles
Water depth range	65 and 131 feet (10 to 22 fathoms)

TABLE 2 EMPIRE WIND OCS-A 0512 LEASE AREA COORDINATES

Point	Latitude WGS84 (degrees minutes)	Longitude WGS84 (degrees minutes)	LORAN9960X	LORAN9960X
1	40° 11.4140’ N	073° 12.8628’ W	26584.04	43507.38
2	40° 12.3128’ N	073° 15.0953’ W	26605.31	43518.46
3	40° 21.9180’ N	073° 36.5904’ W	26790.2	43628.19
4	40° 23.4028’ N	073° 34.5861’ W	26778.55	43642.6
5	40° 18.6769’ N	073° 07.3058’ W	26554.98	43569.94
6	40° 17.8142’ N	073° 04.1532’ W	26529.52	43558.52



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6	40° 17.8142' N	073° 04.1532' W	26529.52	43558.52

FIGURE 1: EMPIRE WIND OCS-A 0512 LEASE AREA

1.4 Beacon Wind - OCS-A 0520 Lease Area

On April 6, 2018, BOEM announced the Proposed Sale Notice for 388,569 offshore acreage, at which time it was divided into two areas, OCS-A 0502 and 0503. At the time of the auction in December 2019, these areas were then divided into three areas, 0520, 0521 and 0522. Equinor was successful in bidding for Lease Area OCS-A 0520 and the lease was executed effective on April 1, 2019. Equinor assigned Beacon Wind to Beacon Wind, LLC (Beacon), in accordance with BOEM's requirements. In 2020, Equinor and bp entered into a 50-50 partnership for Beacon Wind, which is a joint venture between Equinor and bp whereas Equinor is the operator.

The Beacon Wind site extends 19.21 to 42.28 miles south of Martha's Vineyard, spanning 123,474 acres, in water depths between 121.4 and 203.4 feet or approximately 20.23 to 33.9 fathoms (see Table 1.3, Table 1.4 and Figure 1.2). Subject to environmental and technical constraints, which are being explored as part of the design and development phases, it is believed that the site has a potential generating capacity of over approximately 2 GW. The Beacon Wind 1 Project is a 1230 MW project that was selected as a winning bidder in New York State's competitive solicitation for Offshore Wind Renewable Energy Credits (ORECS) in 2021. The remaining capacity of the Beacon Wind lease area will be offered in future solicitations as opportunities become available.

Beacon Wind contains water depths suitable for bottom-fixed foundations, such as monopiles, jackets or gravity base foundations. The exact details of the wind farm design and installation techniques will be determined over the coming years based on site specific data (e.g. geotechnical soil characteristics) and will be influenced by consultation with the fishing community.

The offshore wind farm(s) may be developed and constructed in phases, subject to technical, grid and commercial constraints that are yet to be determined.

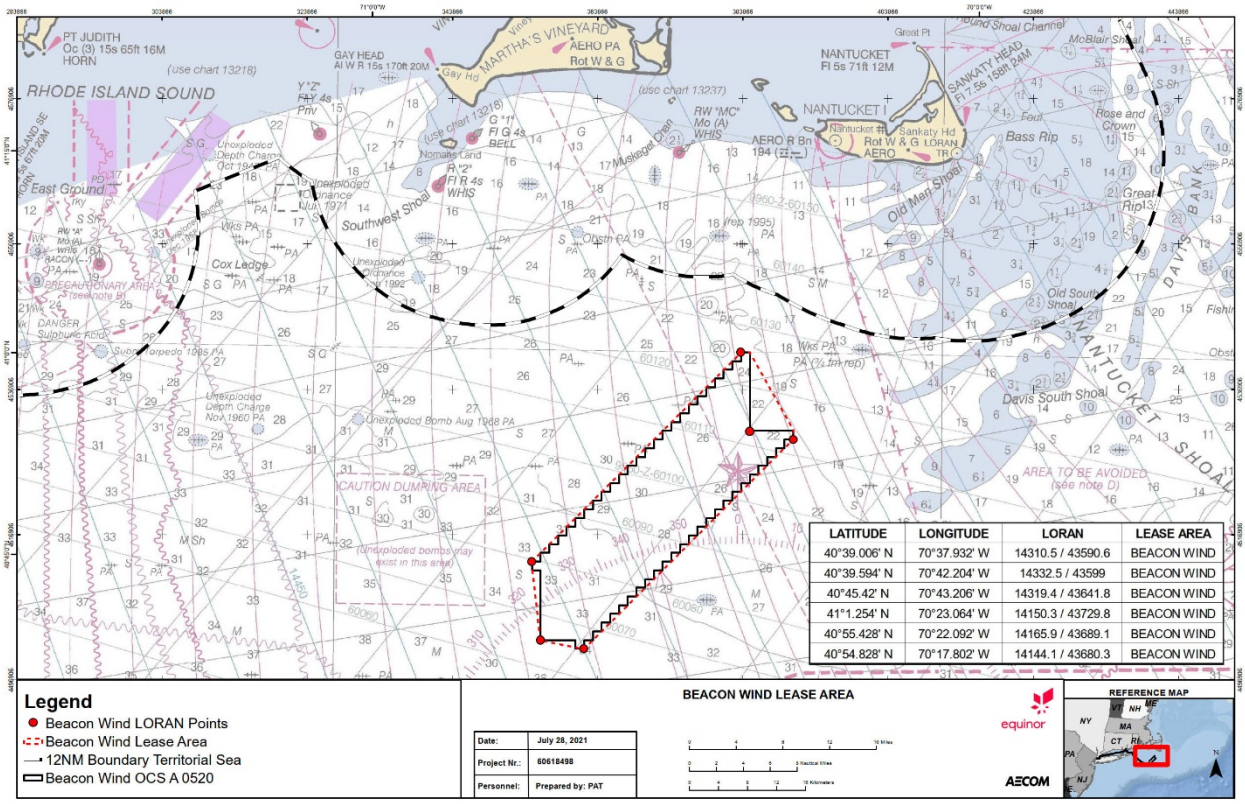
The COP for the Beacon Wind Project Area is being developed for submittal to BOEM. Beacon has initiated site surveys to support development of the COP.

TABLE 3 BEACON WIND OCS-A 0520 LEASE AREA KEY CHARACTERISTICS

Lease Area Information	**Detail**
Size	123,474 acres
Capacity	~2 GW
Distance from shore	From 19.21 miles to 42.28 miles
Water depth range	121.4 and 203.4 feet (20.23 to 33.9 fathoms)

TABLE 4 BEACON WIND OCS - A 0520 LEASE AREA COORDINATES

Point	Latitude WGS84 (degrees minutes)	Longitude WGS84 (degrees minutes)	LORAN9960X	LORAN9960X
1	40° 39.0078’ N	070° 37.9344 W	14310.5	43590.6
2	40° 39.5946’ N	070° 42.2071 W	14332.5	43599
3	40° 45.4170’ N	070° 43.2086 W	14319.4	43641.8
4	41° 01.2539’ N	070° 23.0676 W	14150.3	43729.8
5	40° 55.4284’ N	070° 22.0908 W	14165.9	43689.1
6	40° 54.8294’ N	070° 17.8036 W	14144.1	43680.3



LATITUDE	LONGITUDE	LORAN	LEASE AREA
40°39.006' N	70°37.932' W	14310.5 / 43590.6	BEACON WIND
40°39.594' N	70°42.204' W	14332.5 / 43599	BEACON WIND
40°45.42' N	70°43.206' W	14319.4 / 43641.8	BEACON WIND
41°1.254' N	70°23.064' W	14150.3 / 43729.8	BEACON WIND
40°55.428' N	70°22.092' W	14165.9 / 43689.1	BEACON WIND
40°54.828' N	70°17.802' W	14144.1 / 43680.3	BEACON WIND

Date:	July 28, 2021
Project Nr.:	60618498
Personnel:	Prepared by: PAT

FIGURE 2 BEACON WIND OCS-A 0520 LEASE AREA

2 Principles for Offshore Wind Development

Each offshore wind project will consist of wind turbine generators, interarray cables, offshore export cables, and an offshore substation or converter station in the offshore environment; all facilities of relevance to the fishing stakeholders. Siting of these facilities are being assessed during the design phase and in consultation with the relevant affected parties, including commercial and recreational fishing interests. Equinor's approach and philosophy to project development is premised on the belief that the fishing industry and offshore wind energy developments can coexist. Equinor believes that offshore wind development can be achieved by carefully evaluating existing uses of the project areas, avoiding impacts where feasible, or reducing impacts through effective mitigation.

Equinor has developed a Fisheries Mitigation Plan (FMP) which outlines Equinor's underlying approach and philosophy towards fisheries mitigation. Equinor believes that the wind farm projects can be developed in a manner that minimizes disruption to the natural environment, natural resources, and existing uses of the project areas.

Equinor believes that the fishing industry and offshore wind farm developments can coexist, as such, sets out with the objective to work with the fishing industry in and around the wind farms and their associated facilities. A successful fisheries strategy will require open and regular communication between Equinor and the fishing industry starting with the development and survey phase leading up to permitting and construction, through construction, operation, and decommissioning of the projects, and includes the following principles:

- A commitment to continuing consultation and liaison with the aim of assisting the fishing community to safely continue and resume their fishing activities within the operational site and along the export cable corridor including, but not limited to: commercial/recreational fisheries groups, technical interest groups, state Fisheries Technical Working Groups (F-TWGs) and regulatory agencies;
- Fisheries outreach will be as inclusive as possible; including engagement with fisheries stakeholders through Fishing Industry Representatives ("FIR") and/or groups such as F-TWG and Responsible Offshore Development Alliance (RODA), as well as engaging with organizations or individual fishers not represented in these groups. Equinor notes that this approach has proven effective and well-received throughout its development toward the Projects; and
- Equinor's approach to fisheries mitigation is founded upon the mitigation hierarchy. More specifically, this approach means that we anticipate and avoid impacts on fisheries resource and fishers; avoid impacts where feasible; minimize impacts where avoidance is not possible; and take steps to offset any significant residual adverse impacts that are predicted to remain.

The Projects have no intentions to restrict or apply for restrictions on fishing activities of any sort within the wind farm area(s), or electrical export cable area(s) post construction. Restrictions, if applicable, will likely be limited to the application for standard safety zones during the construction phase, and operational safety zones around manned or sensitive offshore platforms or in some cases access points to turbines. To the extent that any restrictions are necessary, these may be limited to standard safety zones during the construction phase, and operational safety zones around manned or sensitive offshore platforms or access points.

Mitigation measures will be identified and developed with relevant fisheries stakeholders through an iterative process of project design, including site selection, cable routing, timing of works, and consideration of construction and operations methods. Equinor has already taken the following steps to minimize potential impacts:

- Modifying survey schedules and locations in survey planning, and in real-time by adaptive management of survey locations to avoid areas with active and/or seasonal fishing;
- Early spatial planning incorporating data and feedback, and real-time adaptive management during survey data acquisition, to avoid high use, high value, and high sensitivity fisheries areas in planning the export cable routes;
- Arranging fishermen as Offshore Fishing Liaison Representatives on survey vessels whenever safe and advisable to communicate with survey staff and fishermen and avoid conflict;
- Chartering fishing vessels as scout boats during surveys to identify fishing gear and activity, communicate with survey staff and fishermen to avoid conflict;
- Sending regular updates to fishermen regarding survey activities, opportunities for engagement working on the projects, and location of installations such as our research buoys which have attracted recreational fishermen;
- Establishing a fisheries communication and outreach strategy to effectively engage with and solicit input from a wide range of fishers and stakeholders in multiple regions;
- Applying data and fisheries feedback in early spatial planning for the project area, including setting “Layout Rules” for the wind farm layouts that aim to minimize impacts on fishing and facilitate continued safe access to traditional fishing grounds and establishing preferred layouts for Empire Wind 1 through engagement with the Responsible Offshore Development Alliance (RODA) and non-RODA members;
- Applying data and fisheries feedback in early spatial planning for the Beacon Wind Project area by establishing a 1x1 nm wind farm layout to minimize impacts on fishing and facilitate continued safe access to traditional fishing grounds;
- A commitment to share the location of wind turbine and cable locations in a format appropriate to the fishing industry to use in chart plotters and/or the provision of charts with key facility locations appropriately called out; and
- All submarine export cables, interarray cables, wind turbines, and offshore substation locations will also be provided to NOAA and updated on nautical charts appropriately.

As an example of close coordination, prior to surveying the Empire Wind lease area and cable routes in 2018, FLOs gathered information from fishing contacts through dock visits, phone calls, meetings and other means in ports from Massachusetts to Cape May and found mobile gear fishermen, gillnetters and lobstermen based in Freeport, Brooklyn, Shinnecock, Shark River, Point Pleasant and Barnegat Light. Most lobstermen shared their locations with the FLOs, which were provided to survey vessels. In 2018, as predicted, the survey found concentrations of lobster gear around the "Mud Hole" (extension of the Hudson River valley). To avoid contact with fishing gear, Empire postponed the survey of that area until 2019. In 2019 the survey vessel returned during the May lobster Area 4 closure, charted a commercial fishing vessel scout boat, identified the gear and worked closely with fishermen who agreed to move gear temporarily. Between 2018-2020 Equinor conducted over 350 survey days without contacting active fishing gear and received no claims from fishermen. Equinor continues to work with fishermen through FLOs and scout boats to avoid conflicts.

As stated, the FMPs will be updated based on feedback from stakeholder consultation and the maturity of the projects for the development of the Projects. It is Equinor's intent to implement consistent approaches for fisheries communication and fisheries mitigation across its offshore wind assets.

3 Fisheries Communication

3.1 Fisheries Liaison Strategy

Transparency is a cornerstone of Equinor's core values and will form the basis of Equinor's fisheries liaison philosophy. Regular, open consultation will be key to ensuring all parties are well informed, are able to contribute to the discussions and can work towards a joint objective of coexistence. This FCP will be an evolving plan throughout the project development process. The identification of potential impacts on the fishing industry may change as the wind farm(s) design and installation methodology change or become more detailed during the various phases of development. The FCP is designed to describe the liaison and coordination of activities appropriate to the life cycle of the wind farm, through the permitting phase, construction, operation and decommissioning phases, where the requirements and potential impacts may vary in each of these phases.

Liaison activities will be primarily based on best practice guidance and feedback from the fishing industry through consultation. It will also draw on consultation from fisheries bodies, regulators, ports and harbors and legislation, as well as previous experiences of the Equinor team with fisheries liaison work in the offshore wind and oil & gas industry. The best practice guidance will include, but not be limited to:

- Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf, BOEM 2014-654;
- Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison - Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW), UK;
- Fishing and Submarine Cables Working Together – published by the International Cable Protection Committee;
- Mid-Atlantic Fishery Management Council (MAFMC) 2014 – Offshore Wind Best Management Practices Workshop;
- Virginia Coastal Zone Management Program (VCZMP) 2015 – Collaborative Fisheries Planning for Virginia's Offshore Wind Energy Area;
- Lipsky et al. 2016 – Addressing Interactions between Fisheries and Offshore Wind Development: The Block Island Wind Farm; and
- Moura et al. 2015 – Options for Cooperation between Commercial Fishing and Offshore Wind Energy Industries: A Review of Relevant Tools and Best Practices.

Equinor is committed to communicate with fisheries stakeholders on all relevant aspects of the wind farm project(s):

- The Projects communicate with vessels actively fishing in areas in or adjacent to each project areas during site assessment activities.
- The Projects will continue to implement this practice during construction and decommissioning activities to ensure proper notification to vessels and resource managers through the following means.

3.2 Fishing Industry Contacts & Affected Parties

Effective dialogue and consultation has been and will continue to be facilitated with the establishment and maintenance of a comprehensive contact database for local and regional fisheries associations, societies, groups, individual fishermen and the different industry organizations which serves as the basis for distributing communication materials to the fisheries community. Members of the commercial and recreational fishing communities are identified through various channels and include, but are not limited to:

- Contacting fishing industry leaders known through the combined FLOs' and Fisheries Manager's liaison and industry experience;
- The Projects' listserv of over 400 contacts (fishing stakeholders, Federal and State agencies, academia, fishing organizations and concerned citizens);

- Project presentations provided by the Fisheries Manager and Fisheries Liaison to fishing organizations;
- Project specific social media pages;
- Contacting fishing industry association leaders;
- Attending Fishery Management Council meetings;
- Attending meetings related to offshore wind and fisheries interactions;
- Manning stands at commercial and recreational fishing forums;
- Recommendations from state and federal fisheries staff;
- Fisheries Management Council Advisory Panel lists online;
- Public comments and documents online;
- Word of mouth from the fishing community;
- Automatic Identification System (AIS) monitoring including ship identification;
- Fishing vessels identified offshore during surveys by the OFLR;
- NMFS permit holder lists online;
- Dock visits;
- Fisheries contacts information referenced in NYSERDA's New York State Offshore Wind Master Plan Fish and Fisheries Study (NYSERDA, 2017; Appendix J);
- Engagement with RODA; and
- Engagement with NYSERDA and other state efforts along the seaboard.

The database is maintained and regularly updated by the Fisheries Manager and Fisheries Liaison Officer (FLO) in conjunction with the Projects' team members. It should be noted that the fishing industry 'database' will be used solely for the purposes of the Projects' fisheries liaison activities and will not be made available to any individual or group, outside of the Projects' specific requirements. It is acknowledged and appreciated that some fisheries information, such as fishing sites, can be commercially sensitive. In these circumstances the Projects will work with the individual fishing organization/fisherman to establish confidentiality agreements for the purpose of sharing information to meet the objective of compatible use of the offshore environment.

3.3 Fisheries Manager and Fisheries Liaison Officer (FLO)

The Projects have contracted a full-time Fisheries Manager and Fisheries Liaison Officer (FLO) with the appropriate level of knowledge and first-hand experience in the fishing industry of the region to aid in communication with, and the dissemination and gathering of information between the Projects and the fishing industry. The FLO also supports the Projects in the identification of potential impacts, potential mitigation measures, and support with data gathering to inform the environmental and social impact assessments related to commercial and recreational fishing. The FLO will be acting on the Projects' behalf throughout all development stages, including during surveys and the operation and decommissioning phases. The primary roles and responsibilities of the Fisheries Manager and FLO are:

- To serve as the primary point of contact between the project and the fleets;
- To log all interactions between the project team and fisheries representatives accurately and in a way that can be shared by the project team;
- To maintain a fisheries stakeholder database and contacts list for all identified fisheries operating within the vicinity of the offshore wind lease area and export cable throughout all stages the project, covering the following details:
  - Vessel names, owners, registrations and base ports;
  - Vessel radio call sign;
  - Dominant method(s) of fishing and any new technology developing within the fisheries;
  - Static gear surface marker details where applicable;
  - Target species as well as key by-catch species;
  - Fishing grounds relevant to the project;
  - Fishing periods and operating practices of each key fishery; and
  - Feedback, comments and concerns voiced within consultations.
- To arrange meetings with the fishing industry throughout all stages of project development, with frequency, timings and method of communication appropriate to the level of activity at the time;
- To consult the relevant Fishing Industry Representatives;
- To maintain regular liaison with relevant fishermen's associations, individual captains and vessel owners, the New England Fishery Management Council, the Mid-Atlantic Fishery Management Council, and any relevant fisheries regulatory bodies as appropriate;
- To disseminate project related activities which could potentially interact with fisheries stakeholders. This will include:
  - A description of the survey activity or other works to be undertaken;
  - The location and timing of survey activities;
  - The coordinates of partially and/or fully installed infrastructure;
  - A look ahead of the schedule of works where available;

- Details of the vessels involved in the works including the vessels contact details;
- Survey and installation vessels transit routes to and from site;
- The locations and timings of safety exclusion zones that may be required during installation or maintenance activities;
- Health & Safety standards and International Regulations for Preventing Collisions (COLREGS) obligations;
- Contractor obligations towards fisheries stakeholders; and
- Conflict avoidance response procedures and reporting procedures.

- Be available to receive and relay back to the Projects all relevant concerns from the fisheries stakeholders in respect of the various activities associated with the project;
- To keep fisheries stakeholders updated of any changes in project design, or scheduling;
- To assess and advise the Projects on the need for, and subsequently support the Projects in organizing, guard vessels and offshore Fisheries Liaison Representatives;
- Monitor fishing activity within the wind farm site and export cable route during all phases of the project, including during survey activities to minimize disruption to fishing activities;
- Support the Projects in making wind farm survey, installation and operations and maintenance contractors aware of relevant fishing activities, including any relevant fishermen's sensitivities, and procedures for communicating with fishing vessels at sea; and
- Advising and supporting the Projects on the procurement of offshore Fishing Liaison Representatives (OFLRs) to be present offshore during survey activity

Project Fisheries Manager, Elizabeth Marchetti, Sea Risk Solutions

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Elizabeth joined Sea Risk Solutions with extensive fisheries experience along the Atlantic seaboard. She is a former Rhode Island commercial lobster fisherman, Point Judith, R.I. NOAA Port Agent. and field scientist, in major northeast commercial fisheries from ports of New York, Connecticut, Rhode Island, Massachusetts and Maine. Elizabeth was the fisheries liaison for the Block Island Wind Farm from 2015-2019. Elizabeth has also supported the Empire Wind project by serving as an OFLR during geophysical, geotechnical and benthic survey activities in the Empire Wind lease area during summer 2018. She holds a B.S. in Marine Biology from the University of Rhode Island. Elizabeth is now the Projects' Fisheries Manager and serves as the primary contact with the Projects' Management Team on fisheries matters. She is currently a member on the NEFMC Habitat Advisory Panel.

Project Fisheries Liaison Officer, Steve Drew, Sea Risk Solutions

Email: Stephen Drew sdrew@searisksolutions.com

Steve Drew of Sea Risk Solutions is representing the Projects as Fisheries Liaison Officer. Steve has previously spent five years commercial fishing in RI, CT and MA. Steve spent 15 years developing and managing the marine liaison group for a major subsea cable supplier. He managed marine liaison and risk mitigation at cable landings in 25 countries and served five years on the International Cable Protection Committee Board of Directors. He has negotiated and served as liaison officer in cable/fishing agreements on the US West Coast. He has worked overseas on fisheries development and management, and then in the northeast to run a fisheries observer program on commercial boats from Maine to Virginia. He holds B.S. and M.M.A. degrees from the University of Rhode Island.

3.4 Fishing Industry Representatives (FIRs)

Fishing Industry Representatives (FIRs) may serve as the main point of contact within a fishing industry organization. These representatives should represent the views of the fishermen within his or her remit. The FIRs should have the backing and support of the fisheries stakeholders they represent. The FIRs should be able and willing to disseminate information from the FLO or the Projects to the fishing community and vice versa on a timely and all-inclusive basis. The FIR is normally an individual who has worked extensively within or currently represents the industry in that particular sector, port or region. The primary responsibilities of the FIR are:

- To be the main focal point for liaison with fisheries stakeholders under their representation;
- To liaise and cooperate with the FLO to ensure the objectives of the FCP and FMP and underlying principles are achievable;
- To feed back to the FLO any fishermen's concerns, data, or requests for meetings; and
- To assist in the distribution of notices and relevant project information to fisheries stakeholders and to follow up that all relevant parties received such notices.

As fishing industry representation evolves, the Projects and industry representatives may find it most effective to work through groups such as the F-TWG and/or RODA, with which the Projects recently signed an Agreement toward working jointly on offshore wind and fisheries issues. The Projects have contracted FIRs from the following organizations:

- New Bedford Port Authority;
- Massachusetts Lobsterman's Association;
- Commercial Fisheries Center of Rhode Island;

The Projects are currently in discussions to contract an FIR from a New York/Long Island organization.

3.5 Offshore Fisheries Liaison Representatives (OFLRs)

Where required and appropriate, Offshore Fisheries Liaison Representatives (OFLRs) will be present on vessels that are working on behalf of the Projects for wind farm related activities, for example survey vessels and installation vessels. The main purpose is to ensure good communication with fishing vessels encountered during such activities. This may be for the purpose of disseminating information, responding to queries from fishing vessels, acting as a conduit for information offshore between the FLO, FIR, and fisheries stakeholders within or near the site. OFLRs also observe and record set fishing gear locations and instruct survey vessels to avoid fishing gear to prevent fishing interactions/conflict. Individuals wishing to support this activity must have specific expertise, as detailed in the Scope of Work available on the Projects' websites.

3.6 Scout Vessels

At times, Equinor may implement the use of scout vessels (e.g, when onboard FLO not feasible or in an abundance of precaution due to anticipated occurrence of fixed gear) in order to achieve the goal of avoiding contact and/or conflict with fishing gear, including lobster, crab, fish, and conch pots and gill nets. The scout vessel would operate in the planned project activities in advance in an attempt to notify owners of vessels and/or set gear of the planned activities. Individuals wishing to support this activity must have specific vessel and equipment, as detailed in the Scope of Work available on the Projects' websites. These are general instructions for a scout boat supporting Project survey, clearance and/or installation. They may be modified by mutual agreement according to specific operations.

3.7 Communication Channels

Notices and information for fishermen will be distributed via the following mechanisms:

- Via the Fisheries Manager, Fisheries Liaison and Fishing Industry Representatives;
- Fishermen's associations;
- Directly from the FLO to individual fishermen not represented by an FIR, but identified on the FLO's database;
- USCG Notice to Mariners;
- Electronic email distribution to commercial fishing permit holders (NOAA or state agencies);
- Equinor's relevant website page, including AIS details on active project vessels;
- Project specific social media pages;
- The Projects' listserv;
- Through fisheries-specific websites such as F-TWG and RODA should these developer information pages be developed as planned;
- Local harbor masters;
- Survey Flyers;
- Newsletters;
- Presentations or networking at fishing conferences and exhibitions; and
- Fishing news publications.

The FLO has documented over 1600 contact events through December 2020, including individual email notices. Throughout the consultation process, the Projects will be open to consideration of other means or methods to that would provide for effective and efficient communication with the fisheries stakeholders. Topics included in fisheries communication include, but is not limited to the following:

- Information on the proposed nature of activities, including scope, timing and vessels being utilized;
- Details of the main project contacts, including the Fisheries Liaison Officer as the primary point of contact;
- Codes of conduct for vessels undertaking project related activities within the wind farm area and ports;
- Safe operations procedures;
- Emergency response procedures;
- Fishing gear interaction conflicts procedure; and
- Gear claims procedure

4 Offshore Survey Communication Protocols

The Projects are following steps to minimize impacts on the fishing community at all stages of project development, including during offshore survey activities. As such, a survey coexistence and communication strategy is in place, currently valid for the Projects' past and planned surveys. Personnel associated with vessels contracted to perform project work will be trained on these protocols prior to mobilization.

4.1 Scheduling and Outreach

Prior to the onset of site surveys and installation activities, a survey specific fisheries communication and emergency response plan identifying points of contact in emergency situations and incident reporting procedures will be drafted addressing the identified fisheries stakeholders.

Survey Flyers developed for the project(s) will be distributed to the appropriate stakeholders in advance of survey activities, and will also be available on the Projects' websites (e.g., www.empirewind.com; www.beaconwind.com) and include primary points of contact and description of the activities to be conducted.

A scheduling plan will be drafted in consultation with fisheries stakeholders on the appropriate amount of notice required prior to the onset of surveys, installation or operations and maintenance activities. The plan will also detail the agreed effective frequency of general project and project development updates, and how these updates are conducted (e.g. meetings, email, via FIRs etc).

4.2 Guidelines for Survey Interactions with Fishing Activity - Avoidance and Contact

A survey vessel may be the first direct contact between Project representatives and fishermen in the offshore environment. The Projects are committed to minimizing impacts and to coexistence with the fishing industry at all stages of project development, including during offshore survey activities.
Early engagement, good flows of information and positive working relations with fishermen are considered important for successful project implementation.

Two types of fishing interaction have a chance of occurring in the US northeastern region – encounters with static gear such as lobster, crab, fish, and conch pots; gillnets and longlines marked with surface buoys and flags (or with vessels setting/hauling such gear); and encounters with vessels towing, setting or hauling mobile gear including trawls or dredges, at speeds of 2 to 5.5 knots. Guidelines to reduce the risks of negative interactions with the fishing industry during the Projects' survey activities are described below.

- Offshore Fishery Liaison Representative (OFLR)- The survey vessel may carry an onboard FLR to support such contacts and facilitate communication between the survey vessel master and fishermen. In cooperation with vessel officers, the FLR will use available information including fishing experience, active watch, reasonable access to vessel communications, radar, AIS, and other available resources to seek out fishing gear and activities in survey areas and advise survey personnel about them. For details see the OFLR Scope of Work in Section 3.5.1.
- Active watch - Survey personnel as well as the OFLR will maintain an active AIS, visual and radar watch for fishing gear and fishing activities in the area and keep vessel officers informed if fishing is detected nearby, or in areas that could impact the survey.
- The OFLR will be available to "speak the language" of local fishermen over the radio, advise on customary radio frequencies used, etc.
- The OFLR will monitor AIS activity related to fishing in and around the lease area that can be used in planning areas for the survey vessel to be aware of and minimize interaction and conflict with fishing gear.
- If fishing gear and/or active fishing is detected in areas or positions where contact with survey gear, hindrance of fishing, or hindrance of planned survey activities appears likely, the survey vessel will take reasonable measures to avoid interference with fishing. If it is feasible to move to a different part of the survey area without substantial negative impacts, that course of action is preferred.
- Record and report all sightings and approximate positions of fishing gear and vessels, as well as relevant radio contacts for future reference.
- The Projects will issue 'Survey Flyers' with details of survey activity, schedules and key contacts in advance of surveys to provide advanced warning to fishermen, but to also encourage feedback on areas the survey vessel should avoid at specific times or be aware of increased fishing activity.
- The FLO will provide updates via email on the survey schedule as this develops over time.

4.3 Fishing Gear Entanglement

This procedure is designed as a base action plan for the Projects' survey vessels and survey crew members engaged in offshore surveys to safely untangle a snagged tow fish during survey operations, should an unforeseen incident occur. As every situation and survey setup is different, this procedure will be modified to best suit the vessel setup and site conditions. The Projects have developed a gear claim form in collaboration with fishing industry representatives and developers to support consistency in reporting and does not dictate that the claim review procedure will be

consistent or identical among developers. The Projects continue to consult with the regulatory authorities and fisheries stakeholders for the further development and use of this Gear Loss Prevention and Claim Procedure.

Typical equipment at risk of entanglement associated with the Projects' activities include:

- Side scan sonar and/or piggyback array;
- Magnetometer and/or magnetometer array;
- Sparker sled;
- PAMs array;
- Moonpool deployed equipment;
- Ships propulsion system; and/or
- Hydrophone streamer.

4.3.1 Roles and Responsibilities of Vessel Operators

TABLE 5 ROLES AND RESPONSIBILITIES OF VESSEL OPERATORS

Role	Responsibility	Role	Responsibility
Vessel Captain	Maintain safe navigation	Winch operator	Report signs of entanglement
Vessel 2nd Captain	Assist Captain	Navigator	Assist as required record
Vessel Deckhand	Assist on deck	Surveyor	Inform bridge

4.3.2 Personal Protective Equipment (PPE)

PPE requirements are the same for each stage of the operations. Each person must be wearing appropriate PPE as per the vessel specific risk assessment before going onto the work deck areas. This may include, but not limited to, the following PPE and equipment:

- Safety boots;
- Coveralls
- Auto inflate lifejacket or personal survivor suits;
- Safety glasses;
- Gloves;

- Safety harness with fall prevention lanyard;
- Standard boat hook;
- Boat hook outfitted with blunt edge knife attached;
- Large bolt cutter; and/or
- Marker buoy.

4.3.3 Toolbox Talk

After the crew is made aware of an entanglement and action has been taken to make the vessel and equipment safe, a toolbox talk will be required to discuss how to untangle the equipment and how the identified hazards will be controlled. At this point everyone involved in the task shall be reminded of the below:

Stop for Safety

- Everybody has the obligation to stop any task or operation if they feel that it is unsafe to continue.
- Personal safety is more important than the equipment.
- The Survey Party Chief (PC) is in control of the operation.
- The Captain has the ultimate responsibility for personnel and vessel safety.

4.3.4 Entanglement Procedure

The following steps outline actions to be taken in order, and the personnel designated to perform each task. This may be modified in real-time by an onboard competent person if necessary due to the circumstances of the entanglement, site conditions, or any un-foreseen reason. All personnel will wear appropriate PPE as outlined in Section 4.2.3.

1. Winch operator has identified an entanglement with fishing gear and alerted entire survey crew.
2. Navigator immediately radios the bridge to alert the Officer on Watch (OOW) of the entanglement, survey crew stops online recording, and designated Surveyor powers off the towed survey equipment power supply.
3. OOW brings the vessel to a stop immediately upon receiving knowledge of the entanglement, simultaneously, the winch operator begins hauling in on winches until both tow fish are a safe height from the seabed.
4. Designated Survey crew and Vessel Deckhand recovers survey equipment to a safe location alongside the vessel (not to deck).

5. Designated Survey crew recover towed survey equipment to deck. Vessel Deckhand acquires tools designated for entanglements.
6. Recover non-tangled towed survey equipment to deck.
7. Vessel 2nd Captain on deck for communications with Vessel Master, and designated Surveyor(s) remove the tangled gear.
8. Navigator documents position, fishing gear type, buoy colors, and any other pertinent information.
9. OFLR reports fishing gear type, buoy colors, and any other pertinent information to the Fisheries Manager for follow up with the fishing industry to alert the relevant owner.