



Equinor Wind US Northeast & Mid-Atlantic Region

Fisheries Liaison & Outline Coexistence Plan

Title:		
Equinor Wind US Fisheries Liaison & Outline Coexistence Plan		
Document no. :	Contract no.:	Project:
RE-PM710-000013		Lease Areas OCS-A 0512 & OCS-A 0520
Classification:		Distribution:
Open		External
Expiry date: 2020-12-31		Status: Issued
Distribution date:	Rev. no.:	Copy no.:
15 June 2018	02	
21 March 2019	03	
Author(s)/Source(s):		
Martin Goff, Laura Morales, Equinor Wind US Steve Drew, Sea Risk Solutions		
Subjects:		
Fisheries liaison, fisheries communication, coexistence, survey procedures for work in the North East and Mid-Atlantic Regions in relation to Equinor Wind's offshore wind energy developments		
Remarks:		
Version 03 updated to incorporate coexistence updates and Lease Area OCS-A 0520		
Valid from:	Updated:	
01 November 2017	31 May 2019	
Responsible publisher:	Authority to approve deviations:	
Equinor Wind US	Equinor Wind US	
Techn. responsible (Organization unit/ Name):		Date/Signature:
NES WALC NYD Laura Morales		X _____
Approved by (Organization unit/ Name):		Date/Signature:
NES WALC NED Martin Goff		

Table of contents

1	Introduction	4
1.1	About this document	4
1.2	Background	4
1.3	Regulatory Process	5
1.4	Equinor Wind OCS-A 0512 Lease	6
1.5	Equinor Wind OCS-A 0520 Lease	9
2	Outline Co-existence Strategy	12
2.1	Co-existence	12
3	Fisheries Liaison	13
3.1	Fisheries Liaison Strategy	13
3.2	Fishing Industry Contacts & Affected Parties	14
3.3	Fisheries Liaison Officers	14
3.3.1	Equinor Wind Fisheries Liaison Officer, Steve Drew, Sea Risk Solutions	16
3.4	Fishing Industry Representatives (FIRs)	16
3.5	Offshore Fisheries Liaison Representatives (OFLRs)	17
3.5.1	General Responsibilities	18
3.5.2	Duties:	18
3.6	Communication Channels	19
3.7	Communications Plan & Scheduling	19
4	Offshore Survey Coexistence Protocols	21
4.1	DRAFT Guidelines for Survey Interactions with Fishing Activity - Avoidance and Contact	21
4.2	FISHING GEAR ENTANGLEMENT	22
4.2.1	EQUIPMENT AT RISK OF ENTANGLEMENT	22
4.2.2	ROLES AND RESPONSIBILITY	22
4.2.3	PERSONAL PROTECTIVE EQUIPMENT (PPE) AND EQUIPMENT	23
4.2.4	TOOLBOX TALK	23
4.2.5	ENTANGLEMENT PROCEDURE	24

1 Introduction

1.1 About this document

This document is the third draft Fisheries Liaison Plan (FLP) (Document ref. RE-PM710-00003) developed to present the proposed approach for Equinor Wind US, LLC (Equinor Wind), (previously known as Statoil US Wind LLC, or Statoil) to liaising and consulting with the fishing industry in relation to the development of offshore wind energy areas, cable routes and landfall sites located in the northeastern USA, including New York Bight Lease OCS-A 0512 Wind Energy Area (WEA) and Massachusetts Lease OCS-A 520 WEA. This document will continue to be updated and evolve in consultation with the fishing industry as the project(s) moves through the various stages of development.

The FLP has been produced for stakeholders from the fishing industry and is intended to provide clarity on Equinor Wind's delivery objectives, as well as the approach to liaison and co-existence.

Equinor Wind recently was awarded the Massachusetts Lease Area OCS-A 520 (December 2018). Additionally, the New York Lease Area is positioned such that an offshore wind project can supply power to New York and/or New Jersey (Empire Wind and Boardwalk Wind, respectively). Updates to this version include details of the Fisheries Liaison Officer and Equinor Wind's strategy to coexist during offshore site characterization surveys for all WEA's for which Equinor Wind currently maintains a lease through Bureau of Ocean Energy Management (BOEM) in the northeastern US.

1.2 Background

New York Offshore WEA

In 2014, Governor Andrew M. Cuomo launched New York's energy policy, 'Reforming the Energy Vision'. The associated State Energy Plan (SEP) 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 NY goal was almost quadrupled to 9.0 GW by 2035. In January 2018, Governor Phil Murphy signed Executive Order No. 8, which directs the NJ Board of Public Utilities (BPU) to implement the Offshore Wind Economic Development Act (OWEDA) including 3.5 GW of offshore wind by 2030. The development of the New York Lease OCS-A 0512 WEA is expected to make a significant contribution towards achieving these objectives.

The New York OCS-A 0512 WEA 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 WEA 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 New York WEA, which concluded with Statoil as the successful bidder. Statoil signed the commercial wind energy lease OCS-A 0512 on March 15, 2017. Statoil has since been renamed 'Equinor'.

Massachusetts WEAs

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 June 2017, at which time BOEM OCS-A 0486, 0487, 0500 and 0501 were the active lease areas in the Massachusetts/Rhode Island area.

On April 6, 2018, BOEM announced the Proposed Sale Notice for 388,569 offshore acreage, at which time was divided into two additional areas, OCS-A 0502 and 0503. At the time of the auction in December 2019, these areas were divided into three areas, 0520, 0521 and 0522. Equinor Wind was successful in bidding for Lease Area OCS-A 0520 and the lease was executed effective on April ,. 2019.

Each offshore wind project will consist of the wind turbine generators and inter-array cables, an offshore and onshore substation and electrical export cables. The exact location of the electricity grid connection points and associated landfall and electrical export cable routes have yet to be determined, and are a function of the electric grid interconnection location and each state's procurement process for offshore wind energy. These are being/will be assessed during the design phase in consultation with the relevant affected parties.

1.3 Regulatory Process

Equinor Wind has the objective of developing the New York OCS-A 0512 WEA and Massachusetts OCS-A 0520, with the first stage of development involving site characterization surveys, stakeholder engagement and securing the necessary permits and licenses required to construct and operate a utility scale offshore wind farm.

The first step in Equinor Wind's 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 comes into contact with the seabed.

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. It also outlines the environmental, social and technical information needed for BOEM to undertake Environmental and Social Impact Assessments (ESIA) as part of its review under the National Environmental Policy Act (NEPA).

As part of the ESIA, 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.

In addition to the BOEM SAP and COP submittals, Equinor Wind will seek and obtain authorizations from Federal and State regulatory agencies for the deployment of a metocean data measuring system and construction of the wind energy project(s). The SAP and COP phases of the Project(s) are anticipated to occur over the coming years.

1.4 Equinor Wind OCS-A 0512 Lease

The New York OCS-A 0512 WEA (NY WEA) site 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 Figure 1.1). 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 NY WEA 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 during the survey and design phase, and will be influenced by consultation with affected parties, for example 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 SAP for New York OCS-A 0512 WEA was submitted to and approved by BOEM on June 18 and November 21, 2018, respectively. Equinor Wind plans to submit the COP for OCS-A 0512 in summer 2019.

TABLE 1.1 NEW YORK EQUINOR WIND OCS-A 0512 WEA KEY PROJECT CHARACTERISTICS

Project Information	Detail
Size	79,350 acres
Capacity	1-2 GW
Distance from shore	From 14 miles to 30 miles
Water depth range	65 and 131 feet (10 to 22 fathoms)

TABLE 1.2 NEW YORK EQUINOR WIND OCS-A 0512 WEA COORDINATES

WGS/Loran				
Point	Latitude	Longitude	Loran9960X	Loran9960Y
1	40.19023274	-73.21438056	26584.04	43507.38
2	40.2052135	-73.25158885	26605.31	43518.46
3	40.36530071	-73.60983996	26790.2	43628.19
4	40.39004743	-73.57643537	26778.55	43642.6
5	40.31128116	-73.12176326	26554.98	43569.94
6	40.2969026	-73.06921964	26529.52	43558.52

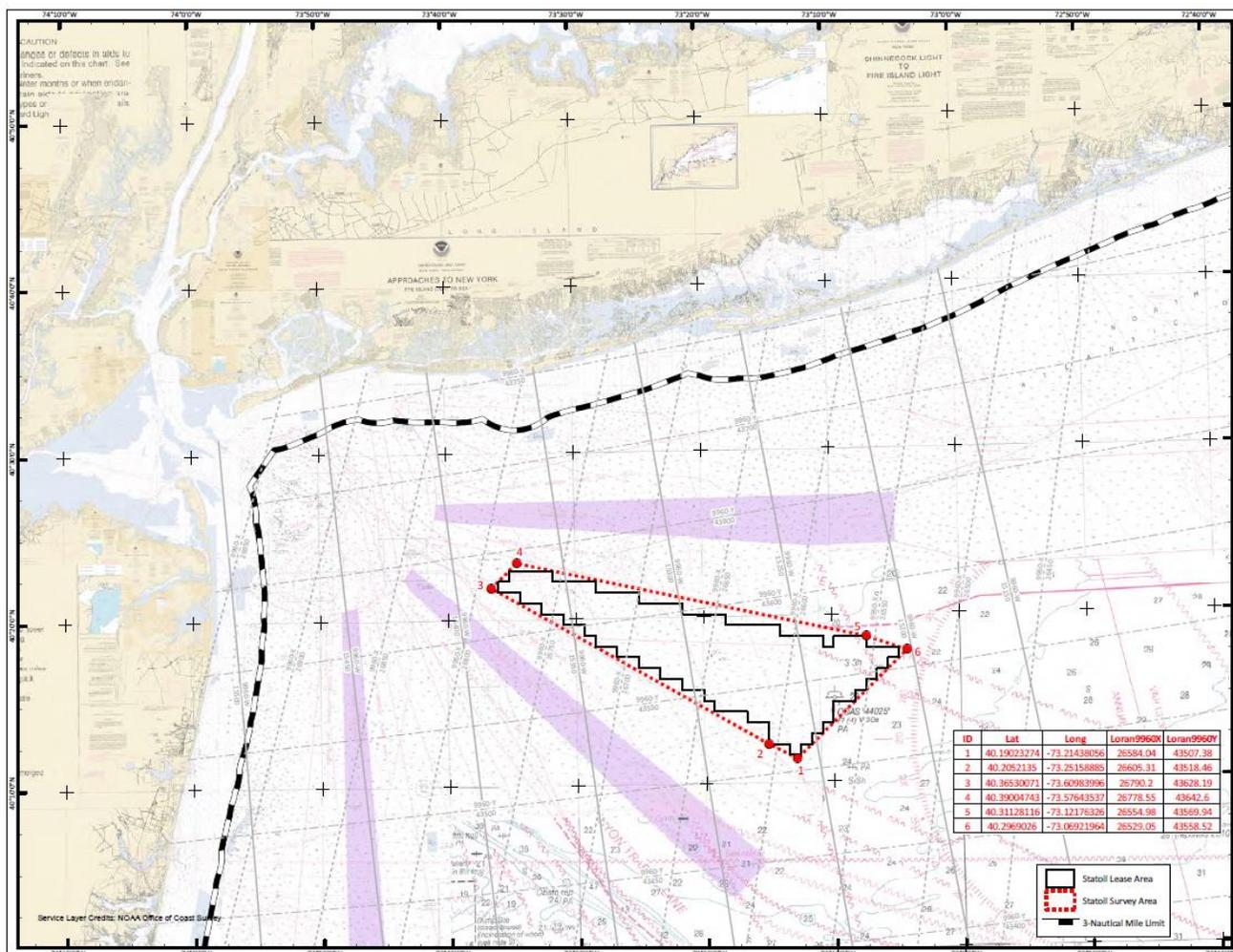


FIGURE 1.1 NEW YORK EQUINOR WIND OCS-A 0512 LEASE

1.5 Equinor Wind OCS-A 0520 Lease

The Massachusetts OCS-A 0520 WEA (MA WEA) 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 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 MA WEA also 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 during the survey and design phase, and will be influenced by consultation with affected parties, for example 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 SAP for the Massachusetts OCS-A 0520 will be developed for submittal to BOEM in 2019. Equinor Wind plans to conduct initial site surveys in spring/summer 2019 to support development of the SAP.

TABLE 1.1 MASSACHUSETTS EQUINOR WIND OCS-A 0520 WEA KEY PROJECT 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 1.2 MASSACHUSETTS EQUINOR WIND OCS-A 0520 WEA COORDINATES

WGS84/Loran				
Id	Latitude	Longitude	Loran9960X	Loran9960Y
1	40.65012951	-70.63223927	14310.5	43590.6
2	40.6599105	-70.70345187	14332.5	43599
3	40.75695028	-70.72014255	14319.4	43641.8
4	41.02089757	-70.38445983	14150.3	43729.8
5	40.9238065	-70.36817983	14165.9	43689.1
6	40.91382262	-70.29672711	14144.1	43680.3

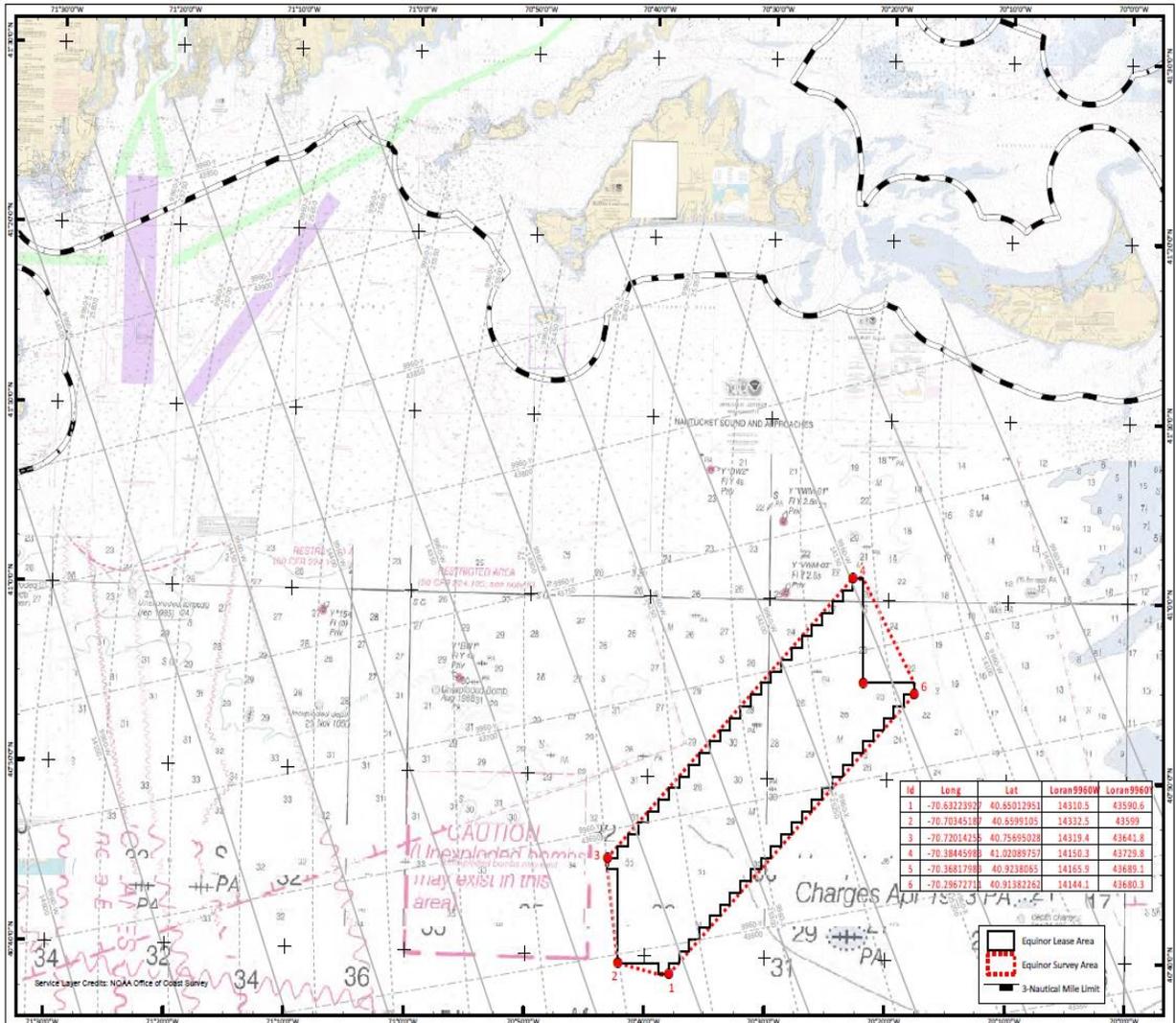


FIGURE 1.2 MASSACHUSETTS EQUINOR WIND OCS-A 0520 LEASE

2 Outline Co-existence Strategy

2.1 Co-existence

Equinor Wind believes that the fishing industry and offshore wind farm developments can co-exist and, as such, sets out with the objective to co-exist with the fishing industry in and around the WEAs. Equinor Wind has 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. Co-existence can be achieved through the objective of avoiding impacts where feasible and, where this is not feasible, reducing impacts through mitigation. A successful co-existence strategy will require open and regular communication between Equinor Wind and the fishing industry starting with the development and survey phase leading up to permitting and construction, through construction, operation, and decommissioning of the wind farm(s). As such a Co-Existence Plan will be prepared.

A Co-existence Plan is in the process of being drafted and will be finalized in consultation with the fishing industry at the time of COP submission and then updated where appropriate at COP approval. The Co-existence Plan will also draw upon Equinor Wind's offshore wind experience in Europe. This will be at a time when detailed wind farm designs and construction and operation practices will be better understood, as well as a better understanding of the interaction between the fishing industry and the proposed offshore wind farms.

The Co-existence Plan will present:

- A commitment to continuing consultation and liaison with the aim of assisting the fishing community to safely 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 (FTWGs) and regulatory agencies;
- The sharing 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;
- A distribution system for ongoing liaison plans and dissemination of information, including construction schedules, survey schedules and planned operations and maintenance activities using a variety of media;
- Mitigation measures (where feasible) to minimize potential impacts on the fishing industry and an execution plan for each measure;
- 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; and
 - Fishing gear snagging and loss procedures and any required claim procedures thereafter.

3 Fisheries Liaison

3.1 Fisheries Liaison Strategy

Openness is a cornerstone of Equinor Wind's core values and will form the basis of Equinor Wind'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 the joint objective of co-existence.

The FLP 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 FLP will be 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 there 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; and
- Mid-Atlantic Fishery Management Council (MAFMC) 2014 – Offshore Wind Best Management Practices Workshop.

3.2 Fishing Industry Contacts & Affected Parties

Effective dialogue and consultation will be facilitated with the establishment of a comprehensive contact database for local and regional fisheries associations, societies, groups, individual fishermen and the different industry organizations. This database will be maintained and regularly updated by the FLO in conjunction with Equinor Wind's key project team members. It should be noted that the fishing industry 'database' will be used solely for the purposes of Equinor Wind's fisheries liaison activities and will not be made available to any individual or group, outside of Equinor Wind's specific requirements. It is acknowledged and appreciated that some fisheries information, such as fishing sites, can be commercially sensitive. In these circumstances Equinor Wind will work with the individual fishing organization / fisherman to establish confidentiality agreements for the purpose of sharing information with the objective of using it to work towards the objective of coexistence.

3.3 Fisheries Liaison Officers

Equinor Wind have contracted a Fisheries Liaison Officer(s) (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, Equinor Wind and the fishing industry. The FLO will also support Equinor Wind 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 Equinor Wind's behalf throughout all development stages, including during surveys and the operation and decommissioning phases. The primary roles and responsibilities of the 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 (see Section 3.4 below).
- To maintain regular liaison with relevant fishermen's associations, individual skippers 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;
 - Conflict avoidance response procedures and reporting procedures.
- Be available to receive and relay back to Equinor Wind 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 Equinor Wind on the need for, and subsequently support Equinor Wind in organizing, guard vessels and offshore Fisheries Liaison Representatives (see section 3.4 below);
- 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 Equinor Wind 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;

-
- Advising and supporting Equinor Wind on the procurement of offshore Fishing Liaison Representatives (OFLRs) to be present offshore during survey activity;

3.3.1 Equinor Wind Fisheries Liaison Officer, Steve Drew, Sea Risk Solutions

Steve Drew of Sea Risk Solutions is representing Equinor Wind 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 ME to VA. He holds B.S. and M.M.A. (Master of Marine Affairs) degrees from the University of Rhode Island.

Steve Drew is supported by FLOs Wolfgang Rain and Elizabeth Marchetti.

Wolfgang joined Sea Risk Solutions as a Partner after nine years managing the marine liaison program for a major cable supplier and ship operator. He has worked as a commercial fisherman in Norway, the Russian Far East and Alaska, as well as international scientific fisheries observer on high seas vessels in the Southern Ocean, Western and North Pacific, and the Bering Sea. Experience includes liaison with maritime authorities, shipping interests, fishermen and others in more than 20 countries in Asia, Europe, Middle East, Africa, India, and the Americas. He has negotiated and served as liaison officer in cable/fishing agreements on the US West Coast. He holds a B.S. in Animal Science from Washington State University.

Elizabeth joined Sea Risk Solutions with extensive fisheries experience along the Atlantic seaboard. She is a former Rhode Island commercial lobster fisher, Point Judith, R.I. NOAA Port Agent. and field scientist, in major northeast commercial fisheries from ports of Rhode Island, Massachusetts and Maine. She holds a B.S. in Marine Biology from the University of Rhode Island. 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

FLO Contact details:

Email: Stephen Drew sdrew@searisksolutions.com

Email: Wolfgang Rain wrain@searisksolutions.com

Email: Elizabeth Marchetti emarchetti@searisksolutions.com

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 Equinor Wind 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 FLP and co-existence strategy 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, Equinor and industry representatives may find it most effective to work through groups such as the F-TWG or Responsible Offshore Development Alliance, with which Equinor recently signed an Agreement toward working jointly on offshore wind and fisheries issues.

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 Equinor Wind in the wind farm related activities, for example survey vessels and installation vessels. The main purpose is to ensure good communications with fishing vessels encountered on site. This may be for the purpose of disseminating information, responding to queries from fishing vessels and acting as a conduit for information offshore between the FLO, FIR and fisheries stakeholders within or near the site. The primary responsibilities of the OFLR are:

- To maintain daily contact with, and keep records of, fishing vessels observed to be within the vicinity of the work areas of wind farm related vessels;
- To keep the masters and watch officers of wind farm related vessels informed of fishing vessels in the vicinity of their working area and the gears and modes of operation of such fishing vessels;
- To keep fishing vessels advised of the wind farm vessels locations, operations, schedules, safety zones and Health & Safety restrictions; and
- To provide on-site adhoc assistance and advice to wind farm related vessel officers with the objective of minimizing hindrance to fishing activities, avoid conflicts and ensuring the commitments in the co-existence plan are adhered to.

A draft job description for an OFLR is as follows:

3.5.1 General Responsibilities

Where required and appropriate, Offshore Fisheries Liaison Representatives (FLRs) will be present on vessels that are working on behalf of Equinor in the offshore wind related activities, for example survey vessels and installation vessels. The main purpose is to ensure good communications with fishing vessels encountered on site. This may be for the purpose of disseminating information, responding to queries from fishing vessels and acting as a conduit for information offshore between the Fishery Liaison Officer (FLO), Fishery Industry Representative (FIR) and fisheries stakeholders within or near the site. The primary responsibilities of the FLR are:

1. To maintain daily contact with, and keep records of, fishing vessels observed to be within the vicinity of the work areas of wind farm related vessels;
2. To keep the masters and watch officers of wind farm related vessels informed of fishing vessels in the vicinity of their working area and the gears and modes of operation of such fishing vessels;
3. To keep fishing vessels advised of the wind farm vessels locations, operations, schedules, safety zones and Health & Safety restrictions; and
4. To provide on-site adhoc assistance and advice to wind farm related vessel officers with the objective of minimizing hindrance to fishing activities, avoid conflicts and ensuring the commitments in the co-existence plan are adhered to.
5. On survey vessels, based on experience and information from fishermen, and subject to confidentiality of fishermen's operations, provide information as requested on seabed characteristics and fishing grounds that could help the survey find areas with appropriate cable burial and/or minimal interactions with fishing. A top priority is to safeguard the confidentiality of information considered sensitive by individual fishermen and/or groups of fishermen. FLR's typically provide non-confidential information that is common knowledge among area fishermen but not otherwise available to the general public.

3.5.2 Duties:

Notification of Fishermen

Notify nearby fishing vessels and gear owners that survey operations are planned or being conducted. Consult survey personnel to consider relocating survey activities on a temporary basis, or requesting that fishermen temporarily relocate their gear away from the area. Maintain an event report with updates delivered daily and compiled report to be delivered at the completion of the survey, describing fisheries encountered. Project management seeks as complete information as can be gained without being intrusive to the fishing vessels or compromising their confidentiality, including name of vessel, homeport, type of vessel (trawler, lobster boat, etc.), documentation number (if available), location (lat-long), date, time, activity (steaming, trawling, hauling, etc.) and any other useful information. Additional communication and liaison with

fishermen and fishing associations may be required. Provide recommendations for fisheries liaison during current and future surveys and cable installation.

Provision of Seabed Information

Upon request by survey personnel, and subject to requirements of the confidentiality of fishermen's information, provide information available from fishing and other sources (charts, logbooks, catch records, communications among fishermen, etc.) about fishing grounds and seabed types on those grounds. The survey is intended in part to identify project sites and routes where cable burial is expected to be feasible (avoiding where possible hard bottom, rough bottom and steep slopes) and/or where potential interactions with fisheries may be minimized. The fisheries representative should provide the non-confidential information available from fishing sources that may be of use in finding routes suitable for cable installation and burial.

3.6 Communication Channels

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

- Via the FIRs where relevant;
- 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;
- 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.

3.7 Communications Plan & Scheduling

Prior to the onset of site surveys and installation activities, a survey specific fisheries communications and emergency response plan will be drafted specifically for the identified fisheries stakeholders. This may be in the form of a survey notification flyer and will aim to include:

- Primary points of contact;
- Points of contact in an emergency situation offshore; and

-
-
- Follow up / incident reporting procedures.

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 Equinor Wind's websites (e.g., www.empirewind.com; www.boardwalk.wind; etc.)

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 Offshore Survey Coexistence Protocols

Equinor Wind is 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 communications strategy is in place, currently valid for Equinor Wind's past and planned surveys. Personnel associated with vessels contracted to perform survey work will be trained on these protocols prior to mobilization.

4.1 DRAFT 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. Equinor Wind is committed to minimizing impacts and to coexist 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 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 Equinor Wind's 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 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 FLO 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 or avoid to minimize interaction and conflict.

- 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.
- Equinor Wind 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.

4.2 Fishing Gear Entanglement

This procedure is designed as a base action plan for Equinor Wind 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.

4.2.1 Typical equipment at risk of entanglement

Side scan sonar and or piggy back array	PAMs array
Magnetometer and or magnetometer array	Moonpool deployed equipment
Sparker sled	Ships propulsion system
Hydrophone streamer	

4.2.2 Roles and responsibility

Role	Responsibility	Role	Responsibility
Vessel Captain	Maintain safe navigation	Winch operator	Report signs of entanglement

Vessel 2 nd Captain	Assist Captain	Navigator	Assist as required record
Vessel Deckhand	Assist on deck	Surveyor	Inform bridge

4.2.3 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;
- 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.

4.2.4 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.

4.2.5 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. Offshore FLR reports fishing gear type, buoy colors, and any other pertinent information to the FLO for follow up with the fishing industry to alert the relevant owner.