Empire Wind Fisheries Communications Plan

Title: Empire Wind Fisheries Communications Plan

Document no. :	Contract no.:	Project:
RE-PM710-000013		**Lease Areas OCS-A 0512**

Classification:	Distribution:
Open	**External**
Expiry date:	Status: Issued

Distribution date:	Rev. no.:	Copy no.:
15 June 2018	**02**	
21 March 2019	**03**	
30 August 2021	**04**	
01 September 2022	**05**	
09 August 2024	**06**	

Author(s)/Source(s):

Scott Lundin, Elizabeth Marchetti, Aaron Baltich-Schecter - Empire Offshore Wind, LLC

Subjects:

Fisheries liaison, fisheries communication, offshore procedures for work in relation to Empire offshore wind energy developments

Remarks:

Version 06 updated to incorporate overall plan updates

Valid from:	Updated:
01 November 2017	**09 August 2024**
Responsible publisher:	Authority to approve deviations:
Empire	**Empire**

Approved by (Organization unit/Name	Date:	Signature:
Renewables US Permitting - Elizabeth Marchetti	**8/09/24**	
Approved by (Organization unit/ Name):	Date:	Signature:
Renewables US Public Affairs -		

Doc. No.

RE-PM710-000013

Table of Contents

Tables

Figures

1 Introduction

This Fisheries Communications Plan (FCP) has been developed to present the proposed approach for Empire Offshore Wind LLC (Empire) to liaise and consult with the fishing industry in relation to the siting, development, and operation of Empire Wind Project (EW 1 and EW 2) in the designated Renewable Energy Lease Area OCS-A 0512 (Lease Area). Empire proposes to develop the Lease Area in two wind farms, known as Empire Wind 1 (EW 1) and Empire Wind 2 (EW 2) (collectively referred to hereafter as the Project).

The FCP has been produced for stakeholders from the fishing industry and is intended to provide clarity on Empire's delivery objectives and its approach to liaise and interact with the fishing industry. Early, often, and ongoing outreach with potentially affected fisheries stakeholders is essential to address fishing industry concerns such as gear, fishing ground impacts, and/or potential litigation. As such, this FCP is considered to be a "living document" that will be updated as feedback and guidance is received from the fishing community, individual fishermen, regulatory agencies, and other applicable stakeholder groups. Empire has also developed a Fisheries Mitigation Plan (FMP), which is available on its website: https://www.empirewind.com/environment-and-sustainability/mariners-and-fisheries/.

The FMP will also be updated as the Project progresses and based upon feedback from the agencies.

1.1 Background

Offshore wind energy procurements are led at the state level. The purpose of the offshore wind facility is to generate renewable electricity from offshore wind farms located in the Lease Area to address the need identified by New York for renewable energy and help the State of New York Public Service Commission (PSC) achieve its renewable energy goals.

Regulatory Framework

The Bureau of Ocean Energy Management (BOEM) issued the Construction and Operations Plan (COP) [1] Approval on February 21, 2024 to construct and operate the Empire Wind Project to be located within the BOEM-designated Renewable Lease Area. The COP describes all the activities necessary for the construction, operation, and decommissioning of the proposed offshore wind farms in the Lease Area. 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

[1] Empire Offshore Wind: Empire Wind Project (EW 1 and EW 2) Construction and Operations Plan, dated November 2023, available at https://www.boem.gov/renewable-energy/state-activities/empire-wind-construction-and-operations-plan.

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, formed 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 Area, several other federal, state, and local agencies also have regulatory authority over the Project, given the locations of the Project components. The primary state approval is issued by the New York PSC, associated with the portion of the facilities located within the state boundary (i.e., 3 nautical miles offshore). This is associated with the designated point of interconnection (e.g., export cable, onshore substation(s) and interconnection cable).

1.2 Empire Wind OCS-A 0512 Lease Area

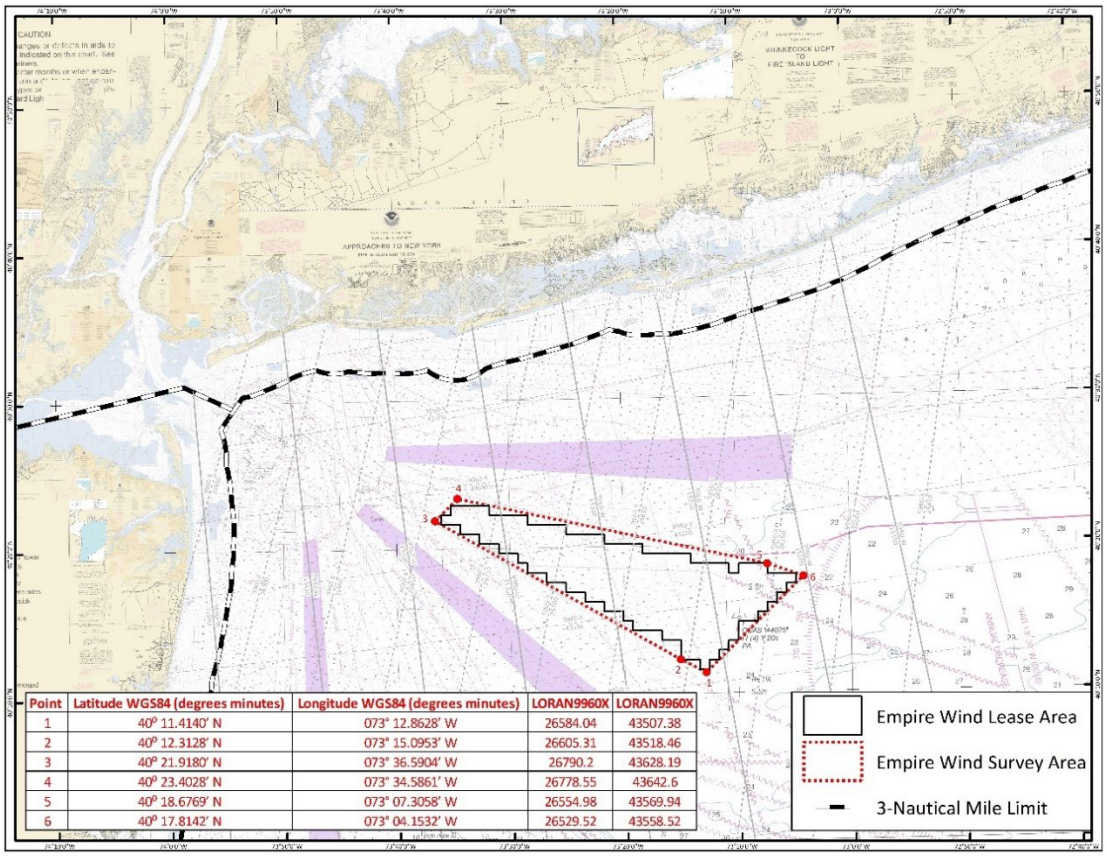
The Lease Area was originally proposed September 2011, as the result of an unsolicited request to the Bureau of Ocean Energy Management (BOEM) from the New York Power Authority (NYPA), Long Island Power Authority (LIPA) and ConEd, for a commercial lease. In June 2012 the area was modified to expand the buffer between shipping lanes and proposed wind turbines from -0.25 nm to 1 nm. 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.

The Lease Area shown in Figure 1.1 covers approximately 79,350 acres (ac; 32,112 hectares [ha]) and is located approximately 14 statute miles (mi) (12 nautical miles [nm], 22 kilometers [km]) south of Long Island, New York and 19.5 mi (16.9 nm, 31.4 km) east of Long Branch, New Jersey.

Empire proposes to develop the Lease Area in two wind farms, known as EW 1 and EW 2. Each wind farm will connect via offshore substations to separate Points of Interconnection (POIs) at onshore locations by way of export cable routes and onshore substations. In this respect, the Project includes two onshore locations in New York where the renewable electricity generated will be transmitted to the electric grid.

TABLE 1 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



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

FIGURE 1: EMPIRE WIND OCS-A 0512 LEASE AREA

2 Principles for Offshore Wind Development

The Project will consist of wind turbine generators, interarray cables, offshore export cables, and offshore substations in the offshore environment; all facilities of relevance to the fishing stakeholders. Siting of these facilities have been assessed during the design and permitting phases in consultation with the relevant affected parties, including commercial and recreational fishing interests. Empire's approach and philosophy to project development is premised on the belief that the fishing industry and offshore wind energy developments can coexist. Empire 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.

Empire has also developed a FMP which outlines Empire's underlying approach and philosophy towards fisheries mitigation. Empire believes that the wind farms in the Lease Area can be developed in a manner that minimizes disruption to the natural environment, natural resources, and existing uses of the Project area.

Empire 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 Empire and the fishing industry starting with the development and survey phase leading up to permitting and construction, through construction, operation, and decommissioning of the Project, 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 corridors 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. Empire notes that this approach has proven effective and well-received throughout its development toward the Project; and
- Empire'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 Project has no intentions to restrict or apply for restrictions on fishing activities of any sort within the Lease Area, or electrical export cable areas 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. Empire 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/safety boats during surveys and construction 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 Project, and location of installations such as our research buoys which have attracted recreational fishermen;
- Establishing a fisheries communications 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 RODA and non-RODA members;
- 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 the National Oceanic and Atmospheric Administration (NOAA) and updated on nautical charts appropriately.

As an example of close coordination, prior to surveying the Empire Wind Lease Area and potential cable routes in 2018, Fisheries Liaison Officers (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 Empire conducted over 350 survey days without contacting active fishing gear and received no claims from fishermen. Empire 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 Project. It is Empire's intent to implement consistent approaches for fisheries communication and fisheries mitigation across its offshore wind assets.

3 Fisheries Communications

3.1 Fisheries Liaison Strategy

Transparency is a cornerstone of Empire's core values and will form the basis of Empire'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 Empire team with fisheries liaison work in the offshore wind and oil & gas industry. The best practice guidance will include, but not be limited to:

- Guidelines for Providing Information on Fisheries for Renewable Development on the Atlantic Outer Continental Shelf (BOEM 2023).
- 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).
- Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison - Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW 2014).
- Fishing and Submarine Cables Working Together – published by the International Cable Protection Committee (ICPC 2009).
- Offshore Wind Best Management Practices Workshop (Mid-Atlantic Fishery Management Council [MAFMC] 2014).
- Collaborative Fisheries Planning for Virginia's Offshore Wind Energy Area (Virginia Coastal Zone Management Program [VCZMP] 2015).
- Addressing Interactions between Fisheries and Offshore Wind Development: The Block Island Wind Farm (Lipsky et al. 2016).
- Options for Cooperation between Commercial Fishing and Offshore Wind Energy Industries: A Review of Relevant Tools and Best Practices (Moura et al. 2015).

Empire is committed to communicate with fisheries stakeholders on all relevant aspects of the Project, including but not limited to the following:

- Communication with vessels actively fishing in areas in or adjacent to the Project area during site assessment activities.
- Implementation of this communications protocol during construction and decommissioning activities to ensure proper notification to vessels and resource managers periodic project status updates to a dedicated Project website, updates and presentation and fisheries councils and commissions and other meetings as scheduled, telephone calls, texts and emails directly to fishermen who provide contact information, contact through offshore Fishing Liaison Representatives (OFLR)-to-fishing vessels by radio, and issuance of Local Notices to Mariners.

3.2 Fishing Industry Contacts & Affected Parties

Effective dialogue and consultation have 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 communities. 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 FLO and industry experience;
- Establishing and maintaining an electronic list-serve to include fishing stakeholders such as federal and state agencies, academia, fishing organizations, independent fishermen, and concerned citizens;
- Providing Project presentations provided by the FLO to fishing organizations;
- Contacting fishing industry association leaders;
- Attending Fishery Management Council meetings;
- Attending meetings related to offshore wind and fisheries interactions;
- Hosting information booths at commercial and recreational fishing forums, tradeshows, and expos;
- Acting on recommendations from state and federal fisheries staff;
- Utilizing online Fisheries Management Council Advisory Panel lists;
- Accessing and incorporating online public comments and documents;
- Facilitating “word of mouth” sharing and contact with and from the fishing community;
- Utilizing Automatic Identification System (AIS) monitoring including ship identification;
- Identification of fishing vessels offshore by the OFLR during surveys;

- NMFS permit holder lists online;
- Implementing port/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. Membership and participation on various fisheries working groups

The contact database is maintained and regularly updated by the FLO in conjunction with the Project's team members. It should be noted that the fishing industry 'database' will be used solely for the purposes of the Project's fisheries liaison activities and will not be made available to any individual or group, outside of the Project's specific requirements. It is acknowledged and appreciated that some fisheries information, such as fishing sites, can be commercially sensitive. In these circumstances the Project 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 Liaison

The Project has a full-time 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 Project and the fishing industry.

The FLO also supports the Project 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 Project'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 commercial and recreational fishing fleets and community;
- 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 Lease Area and submarine export cables 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 FIRs;
- 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 forecast 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 Project 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 Project on the need for, and subsequently support the Project in organizing, guard vessels and OFLRs;
- Monitor fishing activity within the Lease Area and submarine export cable routes during all phases of the project, including during survey activities to minimize disruption to fishing activities;
- Support the Project in making Project 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 Project on the procurement of OFLRs and scout vessels to be present offshore during survey activity

Fisheries Liaison Officer, Elizabeth Marchetti

Email: emarc@equinor.com

Elizabeth joined Empire in 2019 with extensive fisheries experience along the Atlantic seaboard. She is a former Rhode Island commercial 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 Empire's Fisheries Liaison Officer and serves as the primary contact with the Project's Management Team on fisheries matters, heavily supporting the Permitting, Technical and Community Affairs teams. She is the primary member on various working groups and is also the Atlas Wind Fisheries Liaison.

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

- New Bedford Port Authority (NBPA);

- Massachusetts Lobsterman's Association (MLA);
- Commercial Fisheries Center of Rhode Island (CFCRI);
- SJH and Associates LLC (CT)

3.4 Offshore Fisheries Liaison Representatives (OFLRs)

Where required and appropriate, OFLRs will be present on vessels that are working on behalf of the Project for Project-related activities, for example survey vessels and installation vessels. The main purpose is to ensure good communications 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 Project's website.

3.5 Scout/Safety Vessels

At times, Empire may implement the use of scout/safety vessels (e.g, when onboard FLO not feasible or in an abundance of precaution due to anticipated occurrence of fixed gear)for safety and 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 Project's website. These are general instructions for a scout/safety boat supporting Project survey, clearance and/or installation. They may be modified by mutual agreement according to specific operations.

3.6 Communication Channels

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

- Via the and FIRs;
- Fishermen's associations;
- Directly from the FLO to individual fishermen not represented by an FIR, but identified on the FLO's database;
- U.S. Coast Guard Local Notice to Mariners;
- Electronic email distribution to commercial fishing permit holders (NOAA or state agencies);
- Empire's relevant website page, including AIS details on active project vessels;
- Project specific social media pages;

- The Project's list-serve;
- 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.

Topics included in fisheries communications 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 as the primary point of contact;
- Codes of conduct for vessels undertaking project-related activities within the Project area and ports;
- Safe operations procedures;
- Emergency response procedures;
- Fishing gear interaction conflicts procedure; and
- Gear claims procedure.

4 Offshore Communication Protocols

Empire is following steps to minimize impacts on the fishing community at all stages of Project development. As such, a Project coexistence and communications strategy is in place, currently valid for the Project's past and planned surveys and construction activities. 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, Empire develops activity specific fisheries communications and emergency response plans identifying points of contact in emergency situations and incident reporting procedures will be drafted addressing the identified fisheries stakeholders.

Mariner updates developed for the project(s) are distributed to the appropriate stakeholders in advance of survey activities, and are also available on the Project websites (www.empirewind.com;) and include primary points of contact and a description of the activities to be conducted and Project-specific information found in the most current Local Notices to Mariners (LNM). Users can subscribe to the electronic mailing list. The website allows the public to register comments or ask questions as well.

Empire provides a Local Notice to Mariners two weeks in advance of survey and construction activities. Additionally, in accordance with state requirements, Empire will inform stakeholders 30 days in advance of activities in New York State waters.

4.2 Guidelines for Interactions with Fishing Activity - Avoidance and Contact

A Project vessel may be the first direct contact between Project representatives and fishermen in the offshore environment. The Project is committed to minimizing impacts and to coexistence with the fishing industry at all stages of Project development, including during offshore survey, pre-construction, and construction 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 Project's activities are described below.

- OFLR- Project vessels may carry an onboard FLR to support such contacts and facilitate communication between the 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 and work areas and advise Project personnel about them. For details see the OFLR Scope of Work in Section 3.5.1.
- Active watch - Project 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 work activities.
- 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 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 Project gear, hindrance of fishing, or hindrance of planned activities appears likely, the vessel will take reasonable measures to avoid interference with fishing. If it is feasible to move to a different part of the work 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.
- Empire 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 the Project's vessels and crew members engaged in offshore work activities to safely untangle a snagged tow fish, 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. Empire has 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. Empire continues 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 Project's 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.

4.2.1 Roles and Responsibilities of Vessel Operators

TABLE 2 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

4.2.2 Personal Protective Equipment

Personal Protecive Equipment (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.

4.2.3 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 Party Chief (PC) is in control of the operation.
- The Captain has the ultimate responsibility for personnel and vessel safety.

4.2.4 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 crew.
2. Navigator immediately radios the bridge to alert the Officer on Watch (OOW) of the entanglement, crew stops online recording, and designated Surveyor powers off the towed 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 crew and Vessel Deckhand recovers survey equipment to a safe location alongside the vessel (not to deck).
5. Designated crew recover towed equipment to deck. Vessel Deckhand acquires tools designated for entanglements.
6. Recover non-tangled towed 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.

5 Literature Cited

BOEM (Bureau of Ocean Energy Management). 2014. Development of Mitigation Measures to Address Potential Use Conflicts between Commercial Wind Energy Lessees/Grantees and Commercial Fishermen on the Atlantic Outer Continental Shelf. OCS Study BOEM 2014-654. Accessed at: https://www.boem.gov/sites/default/files/renewable-energy-program/Fishing-BMP-Final-Report-July-2014.pdf

BOEM. 2023. Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585. Accessed at: https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf

FLOWW (Fishing Liaison with Offshore Wind and Wet Renewables Group). 2014. Best Practice Guidance for Offshore Renewables Developments: Recommendations for Fisheries Liaison. Accessed at: https://maritime-spatial-planning.ec.europa.eu/sites/default/files/floww-best-practice-guidance-for-offshore-renewables-developments-jan-2014_1.pdf

ICPC (International Cable Protection Committee). 2009. Fishing and Submarine Cables – Working Together. Accessed at: https://iscpc.org/documents/?id=142

Lipsky, A., S. Moura, A, Kenney, R. Bellavance. 2016. Addressing Interactions between Fisheries and Offshore Wind Development: The Block Island Wind Farm.

MAFMC (Mid-Atlantic Fishery Management Council). 2014. Offshore Wind Best Management Practices Workshop. Accessed at: https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/53304256e4b0fcd40d97f3f6/1395671638262/MAFMC_Offshore+Wind+Workshop_Final+Report.pdf

Moura, S., A. Lipsky, and M. Morse. 2015. Options for Cooperation between Commercial Fishing and Offshore Wind Energy Industries. A Review of Relevant Tools and Best Practices. Accessed at: https://osf.io/preprints/marxiv/sfu9e/

NYSERDA (New York State Energy Research and Development Authority). 2017. New York State Offshore Wind Master Plan Fish and Fisheries Study. Access at: https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Research/Biomass-Solar-Wind/Master-Plan/17-25j-Fish-and-Fisheries-Study.pdf

VCZMP (Virginia Coastal Zone Management Program). 2016. Collaborative Fisheries Planning for Virginia's Offshore Wind Energy Area – 2016. Accessed at: https://a-npdc.org/collaborative-fisheriesplanning-for-virginias-offshore-wind-energy-area-2016/