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CALIFORNIA FISHERMEN'S RESILIENCY ASSOCIATION

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California Fishermen's Resiliency Association Minimization and Mitigation Plan for Offshore Non-fishing Development in Northern California

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Preamble

As of 2020, federal, state and local agencies are advocating for the development of offshore wind power, submarine cables and non-petroleum based energy production on California's coastal fishing grounds. California has the most regulated ocean and fishing industry worldwide. Nearly every square inch of California's coastal ocean is covered by fishing closures, marine protected areas, national marine sanctuaries, naval training areas, munitions dumping grounds, submarine cable lanes, vessel traffic separation schemes, national parks, gear, depth and fish species restrictions and fossil fuel development. For California fishermen, the coastal ocean is 100% utilized— there is no "unused" space. This complete utilization manifests itself by fishermen employing various types of fishing gear targeting a wide range of species of fish as seasons change throughout the year. The displacement of fishermen by offshore development from one coastal ocean area of fishing grounds doesn't only affect those individuals and boats, but instead exerts a negative impact on all fishermen as fishing businesses try to relocate onto already occupied fishing grounds

The displacement of fishing activities by offshore developers starts on the fishing grounds and continues right into California's coastal harbors and the coastal communities dependent on the fishing industry as a local economic driver. The loss of this sustainable renewable seafood resource harvested on our community fishing grounds is for all intents and purposes, forever. These losses are often referred to as the "deferred cost of doing business". These deferred costs heaped on coastal communities are a direct result of offshore non-fishing development, and in the past have been allowed by permitting agencies to damage fishing families and coastal communities as the "cost of doing business". This practice is no longer valid. Offshore marine development impacts every single fisherman, and the local

coastal economy whether directly or indirectly. The following document is designed to address the concerns, minimize the impacts to, and mitigate for damages to all fishermen by offshore and harbor developments. The fact that these impacts are real, universal and long lasting is not subject to debate.

Section 1 - List of Impacts

1. **Initial Impacts**
    a. Initial impacts to fishermen, fishing families, and environmental justice fishing communities begin with the announcement of yet another non-fishing spatial challenge potentially resulting in the loss of additional community fishing grounds and the resources (fish) harvested from these grounds. While not easily quantifiable in dollars and cents, the looming threat adds to an already unsteady footing of coastal communities and their ability to prevail over the interests of well funded multi-national development corporations. The community's efforts to protect itself, which is always a totally unpaid volunteer effort, results in lost income, large blocks of time consumed in resisting a usually overwhelming force of paid corporate consultants and a continued erosion of social and cultural coastal quality of life. This document is an example of one of the impacts.. While non-quantifiable in dollars and cents, these sociological impacts are great and long lasting. These challenging impacts hobble coastal members' ability to make any realistic long term plans for continued investment in business and family health and security.
    b. **Legal Counsel** — Local fishermen's organizations and environmental justice fishing communities need to engage with legal counsel at the beginning and through the duration of any proposed non-fishing coastal development proposal as a method of ensuring that fishermen and their communities have some small hope of leveling the playing fields both in negotiations with developers and interaction with state permitting agencies. Funding the costs associated with the employment of attorneys hired to protect fishing interests is generally cost prohibitive for any individual fishing association or fishing community interest group.

2. **Harbor Impacts**
    a. Displacement of fishing fleet activities from existing shoreside facilities start through the takeover of these facilities by offshore development. Typically, the loss of fishing fleet facilities by offshore developers is commonly referred to as a "conversion" and is generally condoned and expedited by local bureaucracies. Local municipalities and agencies typically employ terms such as "surplus, poorly managed, underutilized, and seasonally vacant " to justify removing or converting critical fishing fleet infrastructure to the latest economic rage.
    b. **Hazards to Navigation** — Offshore development will potentially create additional hazards to navigation in Harbor areas through channel blockage by barges, tugs, equipment and floating assemblies, both during periods of limited visibility and

high fishing vessel traffic. The CFRA member port fishermen's associations are extremely concerned about the persistent rumor that the Port of Humboldt Bay will be repeatedly closed throughout the entire lifespan of OSW operations to accommodate the passage of OSW components in and out of Humboldt Bay. The average beam of cargo vessels operating in the Humboldt Bay federal channels is 105 feet. The federal channel width in the entrance, main channel and westerly reach is 400 feet. Floating wind power units presently being proposed from the Humboldt WEA have beams in excess of 300 feet! Movement of these units will require up to five ocean service tow boats. Meanwhile, the West Coast commercial fishing fleet operating in and out of Humboldt Bay will require continuous and uninterrupted twenty-four hour access to this harbor. If the closure of the Port of Humboldt Bay to "ingress and egress" wasn't enough, we are now being told that it is possible that as many as two dozen floating turbine units may require months long mooring in Humboldt Bay as the owners of those units wait for flat weather and spring tidal series in order to tow those units to the WEA. As of January 2023, the California Energy Commission began advocating for yet larger wind turbines with a beam of 400 feet and a vertical height of 1100 feet ! Turbine units of this size will require a complete overhaul of the federal navigation channels in Humboldt Bay.

c. Direct competition between offshore development activities and fishing industry for existing facilities in Humboldt Bay. eg. fuel docks, hoists, boatyard services, work and gear storage areas.
d. Hazard to transiting fishing vessels by the movement of tug traffic, barges, crew boats, and the transportation of assembled modules and components within and in and out of Humboldt Bay
e. Entrance bar hazard caused by offshore projects requiring channel deepening (dredging) — Post federal channel deepening projects have resulted in an increased tidal prism leading to increased ebb current speed which in turn caused greater hazardous entrance bar conditions. These increased current velocities have limited the period of safe passage through the Humboldt Bay entrance bar for fishing fleet ingress and egress. Offshore development which would require channel deepening will again subject fishermen to increased hazardous conditions during inclement weather and sea conditions.
f. **Displacement and Restrictions of in-bay fisheries** — Humboldt Bay is the only location between San Francisco, CA and Westport, Washington for the albacore "live bait" fleet to seine anchovies and sardines for live bait. Most fishing takes place between the U.S. Coast Guard Station and the Redwood Marine Terminal I dock. Offshore Wind development activities at Redwood Marine Terminal I, Fairhaven Dock, 14th Street Dock and along the Eureka Inner Reach will impact fishermen's abilities to take anchovies and sardines during May thru early November, both through spatial challenges such as the planned "in bay" moorage of up to twenty turbine units, barges and support ships and

disruption of fish behavior by increased vessel operations, noise, nighttime illumination and electro-magnetic disturbances.

3. **Site Survey Impacts** — The BOEM reports give the reader the false impression that site survey work to be performed by multiple OSW developers and their subcontractors will have little or no negative impacts on fisheries, fishermen, or Coastal Fishing Communities. BOEM proposes that these surveys may take place over a three to five year time period and at latest reports, may require 300 top 500 "vessel" trips. This is not a negligible impact! So, let's look at some actual real world details that are missing in the BOEM data.
    a. "**Vessel Description** — A vessel, in the case of OSW site survey, is not a 20 foot skiff running out to the WEA on a sunny day. The "vessels" engaged in ocean survey work typically range from 150 feet to 400 feet in length. They carry large crews to deploy side scan sonar, tow acoustical sounding arrays and in some cases, equipment for substrate sampling. These ships are large, unwieldy, and cannot easily maneuver to avoid legally set and operated fishing gear. Survey ships damaged and scattered legally set Dungeness Crab gear in June and July of 2020, (M/V Bold Explorer) while surveying off of Humboldt Bay. Fixed fishing gear damage and loss will occur throughout the period of transit to and from and site survey activities at the WEA. This is not addressed in the BOEM report.
    b. **Vessel Trips** — Vessel survey trips take multiple weeks and even months. These survey vessels work in a given area at the mercy of the weather. Recently, a 200 foot gulf oil supply ship (M/V Cindy Brown Tide) working with a 400 foot long fiber optic cable repair ship (M/V Segro) spent over forty days trying to install only two miles of fiber optic cable from the Samoa Peninsula cable termination site to one and a half nautical miles offshore. The M/V Cindy Brown Tide was on standby, and tied to the dock in Humboldt Bay for 30 days, waiting for workable weather. This vessel then spent eight days "jogging" on station until sea conditions allowed for eight hours of work. The cable repair ship (M/V Segro) had similar experiences: days at sea, jogging in position waiting for decent weather, and a thirty day stint tied to the dock in Humboldt Bay on "standby". All systems and power generation equipment were continuously running 24 hours per day, with both of these vessels moored directly upwind of one of the poorest neighborhoods in the City of Eureka. Nearly every morning at daylight, the Harbor and Pine Hill areas were covered by a pall of diesel particulate and exhaust fumes expelled during the "standby" phase of these two vessels' attempts to work only in the near shore environs of Humboldt County. At one point, the 400 foot long M/V Segro had to travel to San Francisco Bay for more fuel! The above described impacts to "low income" neighborhoods, harbor congestion, and repeated trips attempting to work on the local Dungeness Crab fishing grounds to perform a relatively simple project will be multiplied three to five hundred times over, during site assessment work on the Morro Bay and Humboldt WEA's. Imagine 300-500 more "survey" trips like this! The Coastal

Commission should expect major negative impacts to Coastal Fishing Communities, Environmental Justice Communities, and local commercial fishing activities from site assessment vessels, contrary to the BOEM findings. .

4. **Data Collection Buoys** — To date (April 2022) there is one Lidar Data Collection Buoy anchored in 347 fathoms of water, NNW of the Humboldt WEA. Launched in late September of 2020, this buoy was scheduled to remain in place, on station, for one year. It has been on station only intermittently during a period of one year and seven months. During this time period, the buoy has experienced repeated mechanical failures due to Northern California ocean weather conditions. There have already been six "maintenance" trips to the buoy: one involving a diver, and two trips requiring the use of two "ocean capable" tugs. The buoy has been towed back to Humboldt Bay twice at two miles per hour for the twenty plus mile trip. Each time back in port the buoy underwent repair of wave damage including the replacement of the fuel powered generator which was torn off the buoy by weather. Another "maintenance" trip is scheduled this spring (personal communication, Z&Z Marine, March 15, 2022). The BOEM report clearly states that these data collection buoys will require one trip per year for maintenance. The BOEM report is pure conjecture. A more realistic number for the three planned data collection buoys on either the Humboldt or Morro Bay WEA's is likely to exceed twenty maintenance trips and possibly thirty trips if the buoys are to collect data for 365 days on station. The BOEM report also includes a single day to decommission the buoy. Neither the Northwest National Laboratory, BOEM, wind energy developers, or the commercial marine salvage and construction firms have a plan or any intention to retrieve the 11,000 pound steel anchors and chain holding these buoys in place on the fishing grounds. The "single day" decommissioning plan in the BOEM document is based on abandoning this anchoring system on the fishing grounds. On the U.S. East Coast, the wind energy developer Orsted Inc., conducting BOEM permitted site survey work on a New York WEA, set forty, five hundred pound concrete and steel block anchors on the New York fishing grounds with no intent to retrieve this equipment. The BOEM/Orsted plan is to "decommission" these marine hazards in place. East Coast fishermen are protesting the abandonment of this junk on the fishing grounds with little or no response from BOEM. **Nothing should be left on California's Community Fishing Grounds!** Here is a link to that article.
https://www.wind-watch.org/news/2022/04/30/wind-farms-fish-monitors-irk-fishermen/ Expect major disruptions to fishing activities and impacts to coastal fishing communities from WEA site assessments.

5. **Impacts from Ocean Surface Transit Lanes**
    a. The transportation of modules, equipment, barges, anchoring systems and cable laying vessels will result in the extensive loss of fixed "bottom contact" gear including, crab traps, prawn traps, hagfish traps, longline gear and sable fish traps, as developers vessels run through these legally set fishing gears on the community fishing grounds.

b. Mobile fishing gear such as trolling, seining and trawling will be excluded or displaced by the activities listed above.
c. The transportation of modules, equipment, barges, anchoring systems, cable laying vessels and survey vessels will result in congestion and navigation hazards on the fishing grounds occupied by fishermen.

6. Impacts from Submarine Cables

a. Installation of submarine data transmission cables and electric power transmission cables will result in the loss of access to the fishing resources adjacent to these cables. These losses affect all fishermen by displacing the fishermen previously operating in areas now designated as cable transmission lanes. A typical single fiber optic cable making a 20 mile run across community fishing grounds removes 20 square miles of fishing grounds from fixed and mobile bottom contact fishing gears, as cable operators require a one half mile buffer zone on each side of a cable. Because electric transmission cables are limited in the volume of electrical energy that can be conducted through them, wind power turbine arrays will require from five to twelve separate cables spread out over the seabed from the offshore site to shoreside distribution. As an example, a turbine array requiring eight export cables on a twenty five mile run to a shoreside distribution location will impact four hundred square miles of fishing grounds for that one offshore array. It is important to note that B.O.E.M only lists the square mile area of the lease area, not the additional area lost to cable lanes.
b. Fixed and mobile bottom contact fishing gear will be entangled or lost on submarine cables exposed from seabed current scouring and/or suspended over the seabed. This gear loss will start within the 4-5 fathom depth contour and continue out to the 800 fathom depth curve.
c. Fishermen expect significant disruption of marine life both in the water column and the benthic areas exposed to strong electro-magnetic fields from electrical power transmission cables. It is common knowledge that a fishing boat containing faulty electrical wiring will impact that vessel's ability to catch species such as salmon and albacore tuna. As little as three or four tenths of a volt when measured against the vessel's bonding system can be enough to interfere with fishing success.
d. Interruption of fishing activities by the installation, maintenance and removal of submarine cables throughout the lifespan of individual cables. It is well documented that acoustical survey work, drilling and burying of subsea cables has a direct negative impact on fin fish behaviors which results in depressed fish catches in the vicinity of these non-fishing operations.
e. Interconnecting cables between floating turbines present de facto fishing closures of water column and benthic fishing grounds and present major hazards for various surface fishing gear types including salmon trolling gear that operates up to 6oo feet in depth.

7. **Impacts from proposed floating substations—** OSW developers are now proposing the siting of additional infrastructure on coastal fishing grounds in the form of multiple floating electrical substations. In discussions with OSW representatives, these substations will require multiple anchors and may even have personnel onboard, which will then require regular maintenance and deployment of regular supply vessels to each substation. A buffer area surrounding the substation and anchoring array would be additionally off-limits to fishing activities.
8. **Impacts at Ocean Lease Sites**
    a. The California Energy Commission is advocating for offshore wind energy projects to meet the state's 2045 energy goals which will require 2000 to 3000 square miles of leased areas on community fishing grounds. Fishermen and fishing communities will lose all the fish and seafood resources on any lease area essentially forever.The actual footprint per “unit” is not an accurate indicator of the true negative impact of the loss of resource access because there will be no fishing of any kind between or around various anchored power generation units. The whole lease area will be lost also because individual units may be relocated to other sites within the lease area Many square miles of fishing grounds may be rendered “unfishable” due to loss and abandonment of anchoring systems, cables, construction materials and miscellaneous junk “disposed” of on community fishing grounds, by both contractors and subcontractors working under the permit umbrella of developers.
    b. The effects of anchoring systems and electrical transmission on hard bottom (reef) marine communities are unknown. These offshore development projects are advocated for and planned to go forward without any biological baseline studies of fish and benthic communities on these lease sites. Undocumentable damages to lease site biological communities will be shouldered by fishing communities and not by offshore corporate developers.
    c. Impact of catastrophic loss of power generation units due to environmental conditions
        i. The potential for catastrophic loss of offshore power generation units is huge. The ocean off Humboldt County has recorded some of the largest waves recorded on the west coast during winter weather events. These recorded weather events (storms) typically include wind velocities of 30-60 knots and wave heights in excess of 30 feet with wave periods of less than 20 seconds. Fishermen fully expect wind power or wave energy units to be drug off station, parted from their electrical transmission cables and carried completely away by winter storms (see USCG super buoy, Cape Mendocino). Breakaway units driven by wind and currents will collect hundreds of Dungeness crab traps on their way to grounding on our beaches during the December to June season. Hagfish, sable fish and longline gear are also at risk of loss. Ultimately, wind power units carried away by ocean currents during winter weather events will end up on west coast beaches. Salvage of these units may be problematic or

impossible depending on the coastline structure where these units might go aground.

ii. Abandonment of cable, damaged equipment and anchoring systems will occur during winter storms potentially scattering debris outside of lease sites onto fishing grounds with no way to track or retrieve this junk.

d. Catastrophic Loss of Power Generation Units due to Mechanical Failure

i. All human built infrastructure is subject to catastrophic failure. High failure rates of infrastructure in hostile environments is well documented. One can go online and type in “wind turbine failures” and immediately numerous videos pop up with footage of catastrophic failure of land based wind turbines. These failures include electrical fires in generator components, individual turbine blade failure and “over speed” turbine events resulting in explosive deconstruction of the turbine components and collapse of the tower (mast) supporting the turbine. These failures have two things in common; they result in an extensive debris field and are land based. One could conclude that the salvage and clean-up of a land based failure while challenging is also possible. These catastrophic failures resulting from fires and over speed events will also occur at ocean based wind turbine units. Ocean conditions such as “current set” and “wind drift” will propel the rapid expansion of the resulting ocean debris field.This wind power debris will then quickly move outside of the lease area. Some components will eventually sink to the seabed, thereby fouling community fishing grounds. Floating components will present serious hazards to navigation. The attempt to clean up the debris field may be impossible for weeks or longer, severely hampered by inclement ocean conditions. Decoupling and removing what remains of damaged floating turbine units from the lease area will also prove to be seriously challenged by weather and in some cases present extreme danger to salvage crews and salvage vessels attempting to remove these structures. Who will do this work? Perhaps no one,

e. Transfer of title and subsequent abandonment of energy infrastructure

i. Energy, mining and other extractive industries work via a worldwide model which allows developers to maximize profits and minimize or totally defer maintenance costs. Initially a well funded, and often well known major development corporation will begin exploration, development and extraction of a resource. In this century, oil extraction is the prominent example. Once the infrastructure is built and operating, maintenance is kept to a minimum and costly major overhauls of said infrastructure are avoided. When the profitability of any particular extractive process decreases to a certain point, the initial developer transfers title (sells) the infrastructure and equipment to less well funded, marginal operators. Often as not, the purchasers of these assets acquire and operate the facility via layers of multiple “shell” corporations to avoid legal liability

connected with their operation and eventual abandonment of these marginal extractive facilities and equipment. The Gulf of Mexico and adjacent U.S. States contain thousands of abandoned oil wells, and thousands of miles of oil and gas pipelines. In California, the State is still trying to clean up oil wells in the nearshore Santa Barbara ocean waters which were drilled in the early 1900's. Texaco famously abandoned an early oil platform at Ellwood Beach in Santa Barbara. Offshore telecommunications companies landing fiber optic cables in California waters continually advocate for abandonment of fiber optic cables at the end of these cables' profitable lifespan. No one should expect that international wind power developers will step away from this model of maximizing profit, then selling outdated or marginal equipment to other operators to avoid the responsibility of maintenance, and removal of low profit wind power components from California's Community Fishing Grounds.

f. Decommissioning Impacts

i. Decommissioning impacts can be as great as operational impacts. Many wind power and fossil fuel operators advocate for "decommissioning in place", a heavily spun terminology for the abandonment of outdated or financially "written off" equipment onto community fishing grounds. Sold to the public as "artificial reefs", this abandoned junk destroys miles of fishing grounds and presents biological challenges to existing habitats by allowing species displacement by non-native organisms more suited to colonizing this abandoned equipment.

ii. Funded Decommissioning Activity impacts — Funded and required decommissioning and removal of obsolete or damaged infrastructure, while the correct remedy for restoration of community fishing grounds, presents additional interruption of local fishing operations. Submarine cable operators in Central California are mandated to remove old cables while compensating local fishermen interrupted by removal activities.

g. **Impacts from actions of subcontractors** — Impacts to fishing activities by the actions of cable and offshore energy subcontractors is prevalent and problematic. Offshore oil subcontractors are infamous for "the deep sixing" of unwanted equipment, materials and damaged supplies onto community fishing grounds. These illegal deposits are difficult to confirm but wreak havoc with bottom contact fishing gear. Fishermen "discover" these discards when losing fishing gear in areas previously proven to be clean. Typically, energy companies deny responsibility for fishermen's gear losses on these discards.

h. **Impacts from Multinational Developer's Legal Counsel** — Financial and emotional/moral impacts and costs heaped on small environmental justice community groups by "paid for" predatory behavior by legal staff working for large scale development are not exclusive to coastal fishing communities. On any given day on all corners of the planet, fringe groups of people of color, the poor,

undereducated, native groups and others are the target of multinational developers “hell bent” on maximizing profits, high stock exchange values, shareholder payouts and disgustingly high executive compensation, all at the expense of the environment and the local populations that these corporations exploit. First hand reports from other fishermen groups attempting to defend community fishing grounds and fish resources describe an insidious process that starts with the “nice guys" representing the developers at meetings. Lots of bullshit terminology gets thrown around — “stakeholders”, “community inclusiveness”, etc., all smoke to increase community confusion in the “fog of war” these developers create in order to advance their goal — control and domination of the dialogue. As this process continues, community leaders form the false conclusion that their message is actually having an effect on the developer’s plans. Somewhere in the process the developers initial negotiators disappear and are replaced by attorneys. Non-disclosure agreements (NDA’s) miraculously appear to silence any negative public comment or outcry on the community’s part. This is usually followed up with the “negotiated agreement” document which can only be read under a microscope. As Tom Waits accurately said “the large print giveth, and the small print taketh away”. Usually by this point the group in the crosshairs of the attorneys start to realize too late that they lost almost all of the community assets to the developers and are left with little legal recourse. Only after the fact does the community realize that the only realistic approach in hindsight was an all out assault to kill the planned project. In California, fishermen have at least a small chance of being listened to by the California Coastal Commission — the only agency protective of California’s Coastal Fishing Communities. Immediate involvement with Coastal Commission staff is absolutely necessary the first moment another offshore development project crawls out from under its rock. Every public comment, email, meeting minutes, and communications between fishermen and developers should be forwarded to the commission to establish a clear concise paper trail depicting the fishing communities position. This documentation is critical if negotiations fail and legal action by the community is in order.

9. Impacts from State and Federal Agencies

a. Fishing communities have and will continue to be negatively impacted from both the actions and inactions of local, state and federal agencies responsible for environmental protection, protection of coastal dependent commercial fishing and permitting of non-fishing development on California’s community fishing grounds. While accurately forecasting future actions and policies of these agencies is problematic, we can certainly learn from past agency performance. In California the permitting installation and operation of submarine cables presents a real time lesson for fishermen. Submarine cable projects are ridiculously simple compared to offshore and wind power development. California has four “cable projects”

landing sites, all which impact fishermen. The California Coastal Commission (CCC) and State Lands Commission (SLC) have no policy or guidelines for the mitigation of cable impacts on coastal fishermen. Two of the cable mitigation programs administered directly by multiple port fishermen's associations are successful, while two similar projects have been failures.

b. In June of 2020, fishermen in Mendocino County became aware of a cable project "drilling mud blow-out" event and the loss of equipment on the Manchester Beach Fishing Grounds. Salmon Trollers Marketing Association (est. 1954) contacted CCC, SLC and the California Department of Fish and Wildlife (CDFW) requesting reports from the developer, RTI Infrastructure, Inc and its subcontractor Tull Communications concerning the blowout event and any equipment, drill pipe on debris left on the fishing grounds. None of these agencies responded even though all three agencies have jurisdiction over the development of this cable project. As of October 2021, CDFW has been assigned the task of collecting fishermen's concerns over the planning, siting and operation of OSW projects in California. They are required by the Governor's office to list impacts that fishermen anticipate will negatively affect fishing and coastal communities. CDFW is then to bring these concerns to other state agencies. The process looks like this - outreach, translate, edit and forward data. CDFW nor the California Fish and Game Commission have any history of protecting coastal fisheries from offshore development. These agencies are mandated with the protection of California's natural resources and occupy a secondary position to the agencies permitting OSW. Fishermen need consistent direct access to CCC, SLC and the State Energy Commission, not interpretation by yet another layer of bureaucratic insulation.

Section 2 - Minimization of Impacts

1. **Safety Management Systems —** Operating protocols will be developed for the operations of developer's project support vessels during the installation, operation, and decommissioning of the project, including exclusion zones and corridors for navigation necessary to ensure safety. Protocols will also include safe operating procedures for the operation of commercial fishing vessels in the vicinity of the project area, export cable route, and harbor operations. The safety management system will be the combined responsibility of the Developer, the Fisheries Liaison Officer and the CFRA. All incidents involving transiting vessels, lost or failed equipment, interactions with legally operated fishing gear, or impacts to commercial fishing activities will be reported to the U.S. Coast Guard Office of Marine Safety, California Energy Commission, State Lands Commission and the California Coastal Commission within 48 hours of the reported incident.

2. **Seasonal restriction imposed on the movement of equipment on/off of lease sites** — these restrictions of movement will be required to protect fixed gear (bottom contact)

fishing equipment from loss during crab, black cod and other seasonal use of community fishing grounds.

3. **Seasonal Restrictions on Cable Installation, Routine Maintenance or Removal** —Activities concerning the installation, routine maintenance or removal of submarine cables of any type will be restricted or curtailed during seasonal use of community fishing ground — especially those fisheries dependent on fixed ground contact fishing gear.

4. **Automatic Identification System (AIS) Compliance** — All vessels, barges, scows and each individual floating turbine unit will employ and continuously broadcast AIS signals at all times for the purpose of tracking the movements and paths of support ships, equipment and floating turbine units within the “port of assembly”, during transportation across community fishing grounds and positioning at call area sites. Electronic records of AIS track lines will be maintained for a period of ten years on a website available to the public for the purposes of establishing fixed fishing gear losses by transiting wind power vessels and equipment, and for tracking the path of floating turbine units found to be “off station” or found drifting after a catastrophic parting of anchoring systems.

5. **Inventory and Serialization of Wind Power Components** — Developers will be required to mark all wind power components with both permanent and prominent company serial numbers which identify each component of the anchoring systems, turbine systems and interconnecting transmission cable assemblies. These serial numbers will be used to track the deployment and retrieval or loss of each wind power developers' equipment. Before deployment, all serial numbers of components will be verified by a licensed marine surveyor in the “port of assembly” by written and video formats. These written and video records will be used to verify compliance with the repair, retrieval and decommissioning of any wind power components deployed in the call area or lost on the Community Fishing Grounds.

6. **Location and Retrieval of Failed Wind Power Components** — Developers will locate and retrieve all lost, failed or jettisoned wind power components including but not limited to turbine blades, masts, buoyancy hulls, anchor components, interconnection and transmission cables. When located, either in the call area or outside of the call area on the community fishing grounds, developers will immediately publicize the geographic location of lost or failed components via local “Notice to Mariners”, through local governments agencies and local and statewide fishermen’s associations. Developers shall begin location and retrieval efforts of lost wind power components within ten days of acknowledgment of said losses or malfunctions. Fishermen who hang up and/or lose fixed or mobile fishing gear on these lost or failed components will be compensated by the developer for lost fishing gear and lost fishing opportunity.

7. In the event that equipment, components, or cables would require installation routine or emergency maintenance or removal, a developer at the developer's sole expense, will employ local fishing vessels and crew to assist in minimization of disturbance or loss of fixed gear on the community fishing grounds. Developers will hold harmless hired fishermen, owners and vessels from liability or loss by providing insurance policies written by competent marine insurers, listing fishermen and vessels as additionally insured, during all wind power operations.

8. Developers and subcontractors involved in the installation, maintenance, or removal of offshore infrastructure will give qualified members of the Northern California fishing industry, "first right of refusal" for any employment opportunities on local harbor and offshore development projects.

9. Developers and their partners agree to work in tandem with the CFRA Board of Directors to minimize any negative impacts to all fishermen, and the Northern California fishing industry. These negative impacts include but are not limited to shoreside displacement or loss of fishing infrastructure, conflict arising from increased vessel traffic, hazards to navigation, offshore development operating procedures, catastrophic damage or loss of offshore infrastructure, components or support vessels, groundings, "off station" events, oil or chemical spills, fishing gear loss,displacement of fishing activities on local grounds, etc.

10. As per a Fishing Communities Benefit Agreement, Developers will establish a "lost gear replacement fund" to be administered by three CFRA Boardmembers and two developer representatives for the reimbursement to fishermen claiming legitimate, documentable gear loss to offshore development activities.

11. Developers will maintain adequate marine liability and oil spill insurance in amounts necessary to cover any damage to the surrounding environment and businesses and communities reliant on that environment by the partial or catastrophic failure of a developer's equipment and/or by actions of the developer or subcontractor.

12. Developers and operators of offshore development projects, including submarine cables will post geographic locations of equipment, anchoring systems, floating units and cables to NOAA, U.S. Coast Guard "Notice to Mariners", Nobletec, Rose Point and other navigational software companies. Developers will continue to update the above listed agencies and parties as to any changes of locations of equipment during the total lifespan of the project.

13. Developers, operators and subcontractors shall make available contact information concerning details, location and operations of projects via VHF radio, SSB radio, email and telephone with someone responsible for monitoring and responding to incoming calls on a 24 hour basis.

14. Floating units will be equipped with RACON modules to cause each floating unit to be highly visible on navigational radar.

15. All vessels operating under contract by the developer will be marked with signage, port and starboard with the developer's name in 15" tall lettering.

16. Developers, operators and owners of offshore energy equipment will be required to post performance bonds in adequate amounts to insure payment for the cost of retrieval, removal or decommissioning of all equipment on community fishing grounds for the entire lifetime of each project.

17. Developers must be required to fund legal counsel for negotiating fishermen's community benefit agreements with commercial fishermen's port associations as a condition for the application and possible later granting of all state permits required for offshore development.

18. All State and Federal permitting agencies involved in site selection for offshore wind power projects, by default, are directly responsible for closing hundreds of square miles of California's fishing grounds to fishermen. Both State and Federal agencies must advocate for and cause the reopening of California fishing areas closed to commercial fishing in the aggregate areas equal to the square mile areas closed to commercial fishing by agency actions in siting offshore wind power projects.

Section 3 — Mitigation Measures

Section 4 — Impact Fees

Section 5 — Contractual Agreements Between Developers, Fishermen's Associations and State Permitting Agencies.