Dear OPC members,

I am the President of the Morro Bay Commercial Fishermen's Organization , Tom Hafer. The OPC needs to be aware of the issues we are facing with the proposal of 399 sq. Miles of offshore wind farms off the Central Coast of California.

First, our coastlines have been fished for 100's of years by Indians and our local and transitional commercial fishing fleet. We are protected by law in the Coastal Zone Management Act as the primary users of the ocean. There are ~ 200 plus small commercial fishing business with family, crew, and fishing industry dependent infrastructure out of Morro Bay and Port San Luis. It is your responsibility by law to protect the primary users of the ocean - fishermen.

We have had to already adapt to multitudes of regulatory restrictions that have reduced our fishing areas. These include Marine Protected Areas, the Rock Cod Conservation Area, Essential Fish Habitat areas to name a few. Fishing effort has been progressively squeezed into smaller areas. The wind farm is 399 sq. Miles but there will likely be a barrier of 1 mile around it making it closer to 500 sq. miles. This is a tremendous loss of fishing area. Affecting food security and fishing sustainability.

The area proposed off Morro Bay is a prime deepwater rock cod fishing area. It is also used for sablefish, albacore, tuna, deep water salmon, prawns, and swordfish. The electromagnetic cables will travel thru the nearshore fisheries that include rock fish, Dungenous crab, rock crab, salmon, prawns, hagfish, halibut, sea bass, and squid. We have economic studies of the Morro Bay and Port San Luis commercial fishing industry done by Lisa Wise Consulting going back to 2007 that are located on our website mbcfo.org for more detailed information. Fishing is very fickle, always changing. The past fishing reports are not always indicative of the potential future reports, especially when the RCA is opened for deepwater rock cod fishing again in the near future.

Offshore wind is not new.. It has been in Europe over 20 years. There have been studies on the effect of wind farms on fishing. A study done on the changes to fishing practices around the UK showed: 1. An Increased travel time to fishing with a movement of fishing farther off the coast 2. A decrease in landings of 81% to 91 % of cod, sole, and halibut. An interesting recommendation by the fishermen in this study was to use concrete blankets to cover the cables instead of trenching.

The sonic effects of offshore wind farms on fish have also been studied. Sound travels very welling water. The construction and operation of the wind turbines will cause noise that will affect the behavior of fish and mammals. The noise can cause migration pattern changes, physiological stress, masking (hiding of natural noise), and injury to fish ears (ear hair cells ripped away or cells dying) from installation and trenching noise.

The offshore wind power underwater electric cables are used for intra turbine array to transformer and transformer to shore. The electric currents induce electromagnetic fields that are a concern of how they may influence fish. Studies have shown that there are fish species that are magneto-sensitive using geomagnetic field information for the purpose of orientation. These species include tuna, salmon, sharks, rays, skates and other migratory species.

There are considerable affects of wind farms on radar causing dangerous navigation and an increase possibility of ship collisions near the offshore wind farms especially in the fog (of which we have a lot of). It also alters the ability of the weather buoy to give accurate data. The wind turbines cause false targets or artifacts making it difficult to differentiate real and false targets. The stronger clutter returns from the turbines hide the desired echoes from airplanes, vessels, or weather phenomena. In the near area of the wind farm, the large spectrum widths reduce accuracy of the Doppler velocity estimations. Mitigation will be absolutely necessary to provide modified radar for improved marine safety. This issue could be a significant liability to the county and state for safe air and marine navigation.

There are also studies showing the possibility of large offshore wind farms having an affect on our needed nourishing upwellings by the way their 900 ft high structures and churning blades will block north west winds.
The Service Operation Vessels required for installation and maintenance are massive. They will require a large deep water port. Morro Bay and Port San Luis are too small, shallow, and/or narrow to accommodate them. This will significantly increase large ship traffic in our fishing grounds affecting fish behavior as well. It will be like putting LAX in SLO ocean.
These are some of our major concerns of having a massive wind farm off our pristine coastline. We were originally told it would be 120 sq. Miles so it has significantly expanded and if the wind industry has it their way it will expand further. We need to be aware of these concerns and hold our policy makers and Wind Farm industry responsible for addressing these issues. It is critically important to mitigate the commercial fishing fleet. We will be forever impacted with the potential for significant loss to our fisheries and the ability to be sustainable.

Thank you for your consideration,
Tom Hafer, President MBCFO
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