

Statement of
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before the
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Subcommittee on Fisheries, Wildlife & Oceans
and the
Subcommittee on Energy & Minerals Resources
Regarding
“Renewable Energy Opportunities and Issues
on the Continental Shelf”
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Chairwoman Bordallo, Chairman Costa, members of the Subcommittees. Thank you for the opportunity to provide testimony here this morning.

My name is Zeke Grader and I am the Executive Director for the Pacific Coast Federation of Fishermen’s Associations (PCFFA). PCFFA represents working men and women in the U.S. west coast fishing fleet and is the largest fishermen’s organization on the Pacific Coast. Our members are primarily owner/operators and crew aboard small to mid-size commercial fishing boats utilizing a variety of gears and engaged in numerous different fisheries. Our members can best be described as “family fishermen,” as opposed to the large industrial fishing fleet operations.

I have served as ED and counsel for PCFFA since 1976. Representing, among others, nearly all of California’s organized commercial salmon fishermen, with members in Oregon and Washington as well, we have had to tackle numerous resource issues in our efforts to protect the fishery resource base our members depend upon for their livelihoods. That has included numerous land use issues, such as logging in salmon watersheds, water – as Mr. Costa knows - in terms of both quantity and quality, and fish passage on rivers, as well as ocean activities such as offshore oil development. We joked that at least we didn’t have to worry about air pollution – at least not on the West Coast where we were spared acid rain. That was until recently. Now,

however, we are beginning to understand the implication of decades of green gas house emissions and what that means for our oceans in terms of sea level rise, rising temperatures, currents, upwellings and acidification.

Members of my organization understand clearly the relationship between the development of renewable energy sources – to reduce our “carbon footprint” - and the ecological and economic health of our fisheries. With regards to the development of renewable energy from wind, current and waves on the outer continental shelf, I think I can best describe our position as cautious and conditional. We understand the need for and potential benefits of this energy development, but we are wary, as well, of potential problems, including those for the environment.

Intriguing Potential

My organization was first introduced to the idea of harnessing the energy of waves some 25 years ago. An outer breakwater was being considered for Noyo Harbor on the Mendocino Coast in Northern California. However, the president of our organization, a fisherman from that port, scoffed at the idea of a traditional rock or concrete barrier built by the Corps of Engineers to fight the waves to make entry into harbor safer.

He suggested, instead, a series of buoys to capture the energy of the waves, rather than fight them like a breakwater. His vision was to take the energy of the waves captured by the up-and-down motion of buoys for the generation of electricity. The idea went further from there. The electricity would be used to produce hydrogen from seawater that in turn would be an energy source for powering fishing vessels. This was during one of a series of oil embargoes, and I think he saw this as a way of wresting this source – that he believed was our future for clean energy – from the oil companies before they seized its production and distribution. Most of us at that time equated hydrogen with the Hindenburg. The Corps was not interested in investing research into floating buoys that generated electricity when they had the rock and concrete technology down for ocean breakwaters.

The idea of a dual purpose facility – that could both serve as a breakwater (making port entrances safer) and an energy generation facility has continued to intrigue some of us for the past quarter century. A dual purpose facility, however, is probably unsuitable for most locations. There are few ports around our nation’s coasts where there is both the need for an outer breakwater and the conditions are conducive to a wave energy generation facility. Just the same, on the West Coast, anyway, I believe some wave energy generation facilities could help fishermen address other problems – other than global warming – they are faced with.

PCFFA has been an advocate, along with some recreational fishing organizations, tribes, and conservation groups for the removal of fish-killing dams, particularly antiquated ones with little hydropower or water storage value. One of the issues we have to deal with in the relicensing process for these dams – when we’re proposing their removal – is identifying replacement power. Now days replacement means from a renewable power source. Along with solar and wind, wave generation is one of the renewables we’d like to have available to replace dam hydropower.

In the west, particularly in California, we're also faced with a tremendous overdraft of most of our rivers, along with the San Francisco Bay/Sacramento-San Joaquin Delta system - where most of the salmon harvested offshore the three Pacific Coast states migrate between the Sierra spawning streams and the ocean. To the extent we can develop environmentally acceptable desalination facilities along our coast we have the potential for providing a reliable back-up water supply for coastal urban areas. This means less demand from urban sources on the water currently utilized by agriculture, but more importantly for fishermen this could allow for the restoration of flows to many rivers and help to meet a Delta outflow deficit of some 1.6 million acre-feet.

One of the major objections raised to desalination has been its energy requirements. A nearby wave generation facility, depending on location along the coast, could help to supply a portion of the energy requirements for a desalination operation.

Thus from the view of fishermen looking for renewable replacement power for hydro dams or as a power source for desalination facilities to protect or restore flows to rivers and estuaries, the potential of wave energy, and to a certain extent offshore wind and ocean current energy generation, is intriguing.

Daunting Problems

Now, having looked at some of the potential we see that could be had from wave energy and, perhaps, wind and current, let's look at some of the problems. The problems we see right off are operational. That is not to say that there may not be other physical or biological problems we may be faced with by some of these operations. We're simply not aware of them or at least to what extent there may be problems. The operational problems these facilities pose to fishermen are fairly straight forward. They are potential navigation hazards and preclusion of fishing grounds. Ocean current generation facilities may also pose a hazard to fish life through entrainment.

Navigation Hazards. Large structures placed in the ocean, particularly those on, above, or just under the surface present obstacles for mariners to avoid. Wave generation, offshore wind facilities, and probably most generation facilities around ocean currents will be large, certainly in comparison to our vessels. They will require good marking and lighting. Most important, however, they will have to be located outside of shipping lanes and the courses set by fishermen between ports and fishing grounds.

In addition to the placement of these facilities, some, such as various wave energy technologies that have been proposed, have the potential for getting loose in a major storm, as we witnessed with some of the offshore oil rigs during Hurricane Katrina, and if they're floating at or just below the surface – possibly undetected by radar – they constitute a serious navigation threat to vessels at sea.

Preclusion of Fishing Grounds. The other operational problem is preclusion of fishing grounds. Fishermen on the West Coast have already suffered the loss of access to large parts of the ocean for some of their fisheries due to conservation closures implemented by the Pacific

Fishery Management Council. We're not questioning the need for these - we hope most will only be temporary - but state it as one of the factors fishermen are dealing with.

Moreover, in California the state is already moving ahead implementing a network of restricted or no fishing zones, euphemistically called marine protected areas (to date, they only regulate fishing, not pollution or any other factor affecting the marine environment), and the federal government is preparing to do the same in the EEZ. This will mean, most likely, the loss of some important fishing grounds. We cannot stand the additive impact of the loss of additional fishing grounds by energy generating facilities. For example, one of the areas viewed as having the most potential for a wave generation facility off Northern California is in an area between 35 and 45 fathoms of depth offshore the port of Eureka. This just happens to be the prime Dungeness crab fishing ground.

Thus, while we find the idea of wave energy, in particular, intriguing, we have to be mindful of the physical problems associated with the placement of these facilities and the danger and economic harm that can result if this is not done in a sensitive, thoughtful and careful manner.

Details and Process

While we understand the need for development of renewable energy sources and can envision the possibilities wave energy could provide fishermen, we are not at all comfortable with the current governance of renewable energy generation on the OCS. The leasing authority, the Minerals Management Service (MMS) primary expertise is in offshore oil and gas. We have never found MMS to be sensitive to either fishing operations or the biological needs of fish or the marine ecosystem in our dealings with them in California – specifically in the Santa Barbara Channel.

Consultation. At the very least, we need a requirement in law, that MMS be required to consult with the regional fishery management councils, the National Marine Fisheries Service and the coastal state fishery agencies over the placement of any renewable energy facility in the OCS where it will affect either state or federally managed fisheries.

We also recommend MMS, if it is to remain the offshore leasing entity, be required to consult with affected fishing groups, that bonding be required to cover liability, and mitigation for economic losses suffered by any third party (e.g., fishermen) be required as a result of these energy operations.

Consistency. Further, we recommend that any renewable energy generation facility located on the OCS be operated not only consistent with a state coastal management program, but also with regional fishery management council FMPs [fishery management plans] or, in the case of a state managed fishery, consistent with the statutes or regulations governing an affected fishery.

State Management. Finally, with regards to the Federal Energy Regulatory Commission (FERC) authority, we recommend a change in law to ensure that FERC not preempt state statutes but that its licensing of such facilities be required to be consistent with state statutes and regulations as

they may exist over such operations or for the protection of a state's coastal zone, water quality, and fisheries, among other resources.

Conclusion

Thank you Madam Chairwoman and Mr. Chairman and Subcommittee members for this opportunity to comment. I apologize for a certain ambivalence on our part. I wish I could provide you with more details, more specificity, but we, too, are looking to learn more about a technology that we believe has some exciting potential. It certainly has promise, but in the words of a former Defense Secretary there are the "unknown unknowns" that we have to be mindful of. I'd be happy to attempt to answer any questions members may have.