

MONTEREY BAY NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

**Final Meeting Minutes
July 16, 2020
Special Virtual Meeting – BOEM presentation**

VOTING MEMBERS

Agriculture: Sarah Lopez	CA State Parks: absent
AMBAG: Steve McShane	Commercial Fishing: Kathy Fosmark
At-Large: Dan Haifley	Conservation: Katherine O’Dea
At-Large: Gary Hoffmann	Diving: Brian Nelson
At-Large: PJ Webb	Education: Pamela Neeb Wade
Business & Industry: absent	Harbors: John Haynes
CA Coastal Commission: Tami Grove	Recreation: Gary Pezzi
CA Dept. of Fish & Wildlife: Paul Reilly	Recreational Fishing: Jose Montes
CA EPA: Karen Mogus	Research: John Hunt
CA Resources Agency: Mark Gold	Tourism: Mike Bekker

NON-VOTING MEMBERS

Channel Islands NMS: Chris Mobley
College: Jacob Winnikoff
Cordell Bank NMS: absent
Elkhorn Slough NERR: Dan Brumbaugh
Greater Farallones NMS: absent
Monterey Bay NMS: Paul Michel
National Marine Fisheries Service: Steve Lindley
U.S. Coast Guard: LCDR Lee Crusius

Alternates Present in the audience:

Gwen Kellas – At-Large southern region
Carol Maehr – At Large central region
Cynthia Mathews – At Large northern region
Keith Rootsart – Diving
Julia Dyer – CA EPA
Chelsea Protasio – CA Department of Fish and Wildlife
Bart Selby – Recreation
Steven Haddock – Research
Dawn Hayes – Monterey Bay NMS
Tova Handelman – CA Resource Agency

I. CALL TO ORDER, ROLL CALL, AND MEETING MINUTES

No meeting minute approval necessary

Explained protocols for public comment including that meeting minutes are being recorded and asks that comments remain brief. Welcomes any feedback and asks that comments are kept to three minutes.

Asked SAC members raise their virtual hand for rollcall.

Ways for the SAC to respond to this meeting.

1. Comments on meeting can stand
2. Create subcommittee to draft a comment letter
3. Create a working group that will report out on August 21st SAC meeting

II. MBNMS Superintendent's Update

Paul Michel

Draft management plan has been published for public review as of July 6th

There will be a July 23rd public meeting concerning the draft management plan

Another MBNMS meeting on August 21st as well as a GFNMS meeting on August 24th

All minutes will be uploaded on regs.gov

III. INTRODUCTION TO SPECIAL PRESENTATION

Bill Douros, ONMS West Coast Region Director:

Issue of wind energy in the southwest corner of MBNMS.

Office of National Marine Sanctuary's has been involved from the get-go as the plan originally had the wind farm in the Chumash region.

There is greater interest of the wind farm being in part of MBNMS and certainly is planned to exist on the boarder of MBNMS.

Will hear from representatives from Representative Panetta's office, the DOD, and BOEM among other groups.

No push from ONMS to establish wind farm within the sanctuary but there are concerns about Climate Change and believes a discussion should occur around the establishment of renewable energy. If it turns out the development of renewable energy should encompass part of a sanctuary, then there needs to be a discussion.

No discussion needs to be had currently about regulatory issues concerning the building of the wind farm.

Commissioner Karen Douglas, California Energy Commission for Offshore Wind Energy:

Map indicates two regions that will affect the sanctuary in which BOEM is looking for comments on.

A third area within the sanctuary is up for discussion

The DOD is involved as the building of the wind farm may affect their activities.

Why offshore wind? How does it fit in with California's energy policy?

Renewable energy is in line with several California legislative actions that are looking to lower emissions in the coming decades.

Seek to understand potential and issues that exist around coastal renewable energy generation.

IV. WIND ENERGY PRESENTATION

Jean Thurston-Keller, BOEM Task Force Coordinator

BOEM has jurisdiction in federal waters, so from about 3 – 200 nmi. (Federal waters in California encompasses 215,000 sqmi)

Depth Limit is approximately 1100 meters, Wind speed needs to be greater than 7m/s, and NMS all propose limits to where these turbines can be built.

Offshore wind turbines are larger and therefore need higher wind speeds.
After consideration of limitations, BOEM was left with 6 percent of federal waters to build the wind turbines.
BOEM California Intergovernmental Renewable Energy Task Force was established by former Gov. Brown to serve as a forum for this issue.
Engagement activities included a stakeholder outreach plan, Tribal outreach, and the establishment of a data gateway or the Offshore Wind Energy Gateway.
BOEM is still in the planning and analysis phase (Phase 1).
Still in the area identification phase of phase 1.
This process began in 2018.

Question box Question: Why focus wind energy far away from large population areas of the state?

Answer: Wind speed is a major limiting factor. Wind speeds are not high enough off the coast of the major population centers of California.

Once a lease has been granted building is still not permitted to occur.
Surveys are then conducted to characterize site conditions of the region. They have 5 years maximum to conduct these surveys.
Following the surveys there needs to be environmental reviews and engineering reviews of the project before BOEM can approve the project.
Three Call Areas have been laid out in California based on previously mentioned limitations as well as feedback from partners.
North Coast: Humboldt Call Area
Central Coast: Morrow Bay and Diablo Canyon
20 mi from shore is deemed ideal to reduce many concerns both concerning human activity and ecological processes.
There is no guarantee of the elimination of impacts, in fact there will be impacts regardless of where the turbines are placed. The hope is that 20 mi offshore will limit impacts.

Greg Haas (from Representative Carbajal office):

Carbajal established the working group to begin a discussion of possible areas where offshore wind turbines can be built.
The map generated by the working group of possible wind energy establishment is not a final consensus of the group and they are looking for public comment.
BOEM does not have the jurisdiction to lease within a sanctuary energy development and sanctuaries do not have a protocol for doing so either.
So, there is an area of discussion within the sanctuary.

Doug Bourne, BOEM Regional Supervisor:

Intent is to get feedback for the working group to assist with the planning process.

Steve Chung, DOD Encroachment Program Director:

Committed to continually working collaboratively with partners to explore offshore wind energy production that does not prevent DOD operations.

Bill Douros:

Please provide feedback on areas bordering MBNMS as well as the discussion area within the sanctuary.

Again, BOEM's authority does not extend into a sanctuary or national park.

The BOEM process is well liked by private partners.

There is currently no federal law allowing for sanctuaries to lease regions of a sanctuary for exclusive rights.

BOEM and CA Energy Commission have been planning diligently for the creation of renewable energy in California.

BOEM Visual Simulation Video**Jean Thurston-Keller:**

Created simulations for what the wind turbines would look like from the coast.

Discussions with the Big Sur Community Council.

Go to BOEM.gov/march/9/2020 to view the visual simulation video.

Next Steps and Public Input Opportunities**Eli Harland (Adviser to Karen Douglas):**

Been performing public outreach around the central coast.

Likely that the feedback deadline will get pushed back.

Looking to create a stakeholder outreach report from the data gathered.

Comments can be submitted via:

*email at docket@energy.ca.gov, include docket number 17-MISC-01 and "California Offshore Renewable Energy" in the subject line

*mail at California Energy Commission

Docket Unit, MS-4

Docket No. 17-MISC-01

1516 Ninth Street

Sacramento, CA 95814-5512

*online at

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=17-MISC-01>

V. PUBLIC COMMENT

Steve Sheiblauer: My comments are about the sanctuary "discussion area".

First, having been heavily involved in OSW issues, while it was a nice, very general overview, the power point you saw is wholly inadequate to understand the history, policies, environmental, and socio-economic concerns that surround OSW.

RE history, and precedence, I point out that in designating this sanctuary, the two big, non-permittable rules targeted industrial uses. They are the ban on oil and gas development, and ban on offshore mining, dredging and disposal. Following its designation, this sanctuary has enacted or enabled a number of protective rules, such as the ban on PWC. It strongly discouraged a proposal by three telecommunications companies for cable-laying—out of habitat concerns. Habitat friendly guidelines for desalination plants were written. And, the sanctuary's advocating for the state's MPA-fishery closures, were also largely about habitat-protection measures. There are other examples. To now allow a large-scale industrial use—a wind farm—would be contrary to these actions,

considering that the effects on habitat, and other concerns with this development, are many and large.

Tom Hafer: President of the Morro Bay Fishing organization. Totally oppose any wind farm activity in the sanctuary. Production will be way to close to the beach and will harm fishing activities. Fisherman are already aware and support proposition for wind energy production in the Morro Bay Call Area. Fisherman are feeling like they are losing further ground. Yields time to wife Sheri Hafer.

Sheri Hafer: Thank you for allowing me to comment at this SAC council meeting. I am Sheri Hafer, wife of commercial fisherman Tom Hafer. He has been fishing for 46 years. We have been married for 34 of those years. He fishes out of Morro Bay on a 42' vessel the Kathryn H named after our daughter. He fishes with traps for spot prawns and near shore rockfish from Morro Bay to Big Sur and so we will be directly affected by a wind farm off of Morro Bay. Tom is the President of the Morro Bay Commercial Fishermen's Organization and has been for the last 7 years. We have been very involved with the planning process regarding Offshore Wind Farm leases off the Central Coast for the last 4 years. We have sent in our comments to the Federal Register on the 2 sites listed as call areas. We have told them that the Diablo call area was a very important commercial fishing area and that we would only agree to the proposed area off Morro Bay outside of Piedras Blancas. We also worked with Alla Weinstein of Castle wind to come up with a fair mitigation agreement for the affected commercial fishing community within the Morro Bay call area. The commercial fishermen are the primary stakeholders affected. They have many potential impacts including gear entanglement, potential collisions, radar dysfunction, displacement of fish, obstacles to fishermen navigation, and loss of fishing area. This mitigation agreement with the fishermen was the first of its kind and should be a prerequisite insisted upon before any wind farm lease is implemented. Although we were able to negotiate this mitigation agreement with a potential wind leaser, it doesn't mean we don't have significant concerns regarding the effect of wind turbines on marine life. The stance we are taking, since we realize that this is likely a train we cannot stop, is that these turbines should stay outside 30 miles and be limited in scope. If we are not careful, we will see our ocean industrialized with as many as 500 turbines off our coast and within 3 miles off our shores as the CADEMO project off of Vandenberg is planning. This is what happened in Europe. The Sanctuary policy could prevent this. One of the most significant impacts that wind farms can have is Noise Pollution. Sound is important in the marine ecosystem for communication, feeding, and predatory avoidance. Studies show that marine species make shifts in their behavior to sound - Mammals do at 50-100 dB, fish do at 10 - 120dB, and birds do at 40 - 130dB. Studies reveal that wind turbine operational noise is 80-120dB and that constructional noise is 30-260dB! Construction noise includes shipping, geophysical survey, drilling, dredging, and trenching. Construction can take months to years to complete.

A biological risk assessment of Wind Farms on Fish was done in Europe by Kikuchi in 2009. It found that and I quote - "Hearing specialist fish possess a zone of audibility within a 50 miles radius of wind farm construction noise and there is a possibility that masking, which is when loud sounds drown out soft sounds, occurs within their zone of audibility. Physical effects such as internal and external ear injuries or deafness are possible within close proximity to the construction site. Operational noise of wind turbines will be detectable up to a distance of 2.5 miles for certain fish. Within this zone, behavioral and or physiological stress effects are also possible due to operational wind farm noise." Unquote. This study comments: We must defend an environmental principle - "Processes that solve one environmental problem but cause another should be avoided". The

potential significant effect of noise pollution from wind farms on marine life seems to be in direct conflict with the purpose of a sanctuary to limit human activity, prevent pollution, and to secure habitat for endangered species. It should be your policy to take the precautionary approach to protect marine life and deny wind farms in the sanctuary. In fact, you should not allow them within at least 2.5 miles of the border of the sanctuary if you want to take the minimum precautions and 50 miles if you want to take maximal precautions in protecting the sanctuary from potential harmful effects of noise according to the current and available science. We sent a copy of this study to Bill Douros to review. Thank you for your time.

Lane Johnston: Supports Steve Sheiblaue's comments. With Responsible Offshore Development Alliance (RODA.) Concerned with the lack of fisherman input in this process in the Pacific region. Believes that sanctuaries should not be given leasing power. This effort has included many except for the largest interest group. Fishermen are already under engaged.

Catherine Moon: Field representative for Congressman Panetta. Takes the time to thank everyone for being present at today's meeting.

John Cluett: Yet to hear any discussion about where electrical transmission lines will come ashore. How and where they will come ashore and where will they be connected to the grid? Assumes they will be high voltage line, and will they be on large, visually impactful lines. How will this impact the beauty of the Big Sur Coast?

Comment period closed. Additional comment can be posted on the website.

VI. ADVISORY COUNCIL Q&A AND DISCUSSION

Dan Haifley: Is there a time value to each of the steps and the whole process of the leasing process? Would like to thank the task force and for involving the advisory council early on in the process. I did seek out some views from a few people in the area represented by Cynthia Mathews and myself – the northern region. The Superintendent specifically asked us to provide feedback on spatial concepts (email of 6/30) List of initial concerns: There should not be development in MBNMS; avoid areas where there is large risk of wildlife entanglement; avoid areas of popular seabird migration routes; be cognizant of the possibility of boats that lack sufficient radar could struggle to see turbines in adverse weather conditions; no conflicts with areas deemed sensitive habitats; mitigate seismic testing impacts; no conflict with historical sites; no conflict with navy/DOD activities.

Jean Thurston-Keller: There are approximate times for each of the steps in the leasing process. Willing to provide a copy from the presentation to Dan. All estimated time values are guidelines. Each process takes as long as the process will take. Especially with the large geographic nature of the state, each process can take longer.

Gary Hoffmann: Deep concerns with the discussion area. Allowing the production of wind energy within the sanctuary is incongruous with the establishment of the boundary. BOEM's process seems backwards in terms of the NEPA process coming after site approval. Recognizes the need for renewable energy, but will the energy being produced serve to be more detrimental to the

environment than the lack of renewable energy. Concerned about security activities around wind farm.

Paul Reilly: Establishment of wind turbines in MBNMS will create no fishing areas. Is there information that will support or refute that notion? How will an individual wind turbine be anchored? What is a drag and ben anchor?

Doug Bourne: No information to support or refute the statement at this time. BOEM has no authority to lease within the sanctuary. The NEPA process will be followed before any activities proceed. Once sites are determined there will be a review of the appropriate anchor technology. This will be based on substrate and benthic conditions. In the past, a drag embedment anchor has been used. Not an engineer but similar to a boat anchor.

Keith Rootsart: My name is Keith Rootsart SAC Diving Alternate. I have been researching offshore wind power and providing my thoughts on this from the perspective of a consulting energy engineer to council members before I was a council member. I have made public comments on this issue to BOEM. Offshore wind has a number of hurdles: Lack of deep-water ports, no north American manufacturer, the promise of immature technology, regulatory restrictions, the DOD, and the highest levelized cost of any energy technology. The ideal energy solution for California is distributed generation and storage. This improves diversity and reduces transmission losses. Windmills are a stop gap measure until the energy market evolves new technologies and improves PV and storage. These windmills are not the windmills you want nor are they in the right place. The wind is important to a windmill, it is what makes it turn and that is what makes energy. The wind in the north coast call area has 4 times the energy than in SLO where to get enough wind energy, the windmills have a greater windswept area and that means they are very tall and more expensive and less efficient. So why build your first project in a place that does not have the best energy? The excuse from Trident was that the research north coast transmission. And while it's true SLO has infrastructure, transmission improvements in the north are very possible. There is already a right of way from Redding to Eureka and to upgrade that transmission service would be less than 2% of construction costs. So, what is the real reason? Take a look at what is directly under the proposed windmills in SLO and you will see the Monterey Shale Formation. The untapped reserves on the ocean side of the San Andreas are enormous. But, a windmill is not an oil platform. Keep in mind that 10-megawatt floating windmill 900 feet tall is a fictitious machine; it does not exist. However, those fictitious windmills could be a prelude extract oil and pump it to shore at some point in the future. Which would put oil extraction in the Chumash National Marine Sanctuary and if allowed in the discussion area, The Monterey Bay National Marine Sanctuary. Presently the Monterey Bay Shale Formation has unproductive oil platforms that are struggling to be productive and where fracking in Santa Barbara County is not prohibited. The oil industry is desperate to tap this reserve. Yeah, that sounds cynical, but why else would you do that here, when the north is such a better idea? I recommend the SAC not support this proposal to permit floating windmills inside the sanctuary.

Katherine O'Dea: Conservation seat on SAC and a representative from Save Our Shores. Did not understand connection between desalination and windfarm projects? Are there other sites outside the sanctuary that could be used for wind energy production rather than within the sanctuary?

Bill Douros: MBNMS regulations prevent any activity that disturbs the seabed as well as oil and gas activities, but there is no mention of desalination activities or wind energy activities. Wanted to show that there is flexibility in terms of allowing wind farms within the sanctuary as MBNMS is looking at desalination plants.

Katherine O'Dea: Are there other sites outside the sanctuary that could be used for wind energy production rather than within the sanctuary?

Karen Douglas: DOD had significant issues with the two central coast call areas. The two areas north and south of the southern end of the sanctuary were taken off of the table originally because they were close to shore but moved closer because of conflicts with the DOD. BOEM is asking for comment about these regions. Discussion area was not proposed by anyone, but rather flagged for possible dialogue as it does not interfere with DOD operations.

Katherine O'Dea: With regards to Gary's comments on the NEPA process. She has heard that NEPA has been rolled back thanks to the current administration. She fears for any process such as this going forward. Would like to reference Steve Scheiblauber's comments concerning the issue of precedent setting. Oppose construction of the wind farm within the sanctuary, but not overall wind farm production.

Bill Douros: Wanted to get feedback about building in the sanctuary before meeting with other groups/agencies who may say they want to build inside the sanctuary. Wanted to invite the sanctuary to the table early in the process so that industries did not deny other areas except the sanctuary.

Karen Douglas: power lines have to connect to shore and will involve several government agencies. There will be a robust environmental analysis in multiple phases of this project.

Bart Selby: Alternate recreation seat. Generally supportive of wind energy offshore. Believes that we should do everything we can to get off of oil. Listen to the stakeholders and properly follow the process. Concerns: EMF from transmission lines and the impact on whale migration; we should do the work to understand to the brown pelican which is thought to be the most impacted species in these sorts of projects.

Mark Gold: Executive Director of Ocean Executive Council. Heard about potential conflicts with DOD and wind farms. What are the concerns and what are the constraints in terms of looking at areas as a viable site?

Steve Chung: DOD has determined that the central coast call areas are incompatible with the DOD mission. They want public input on other wind energy regions in the central coast.

Mark Gold: What exactly is incompatible? Is there available information for the public?

Steve Chung: The purpose of the outreach meetings, which the DOD is committed to, is to work collaboratively with the public and stakeholders. As the process moves along there will be more information, he is sure.

Kathy Fosmark: My name is Kathy Fosmark and I am a commercial fishing representative on the Sanctuary Advisory Council. I also represent fishermen from Port San Luis to Pillar Point, San Francisco as Co-Chair of the Alliance of Communities for Sustainable Fisheries.

1) BOEM proposed 311 square miles for the Morro Bay Call Area

Now CA Energy Commission proposes another 238 sq miles

Now the Sanctuary throws in “for discussion” ANOTHER 90 sq miles

And we know from the Offshore Wind Energy letter that the industry is demanding an additional 181 square miles.

That’s a total of 730 square miles, plus the possibility of the sanctuary’s 90 sq miles.

2) We must step back to recall that fishermen in Morro Bay and Avila met with one proactive developer, and after much discussion agreed that a piece of the original BOEM Call Area of 125 sq miles would cause the least harm to fishermen and their communities, and agreed not to oppose a project of that size and location.

3) Now, everyone is grabbing for more space, to the clear detriment of fishermen.

4) Recall also that the OUTER CONTINENTAL SHELF LANDS ACT is not the only applicable law. The MAGNUSON-STEVENSON CONSERVATION AND FISHERY MANAGEMENT ACT also speaks to the use of the ocean, setting forth sustainability management measures for the last 50 years to feed the nation. These conservation measures of stock rebuilding and habitat protection were done at a sacrifice by fishermen in earnest to assure more fish and better harvest and to maintain a future healthy sustainable seafood renewable resource for our country’s food supply.

5) We should not trade, or sacrifice one sustainable use of renewable resources, seafood, for another, wind energy.

6) Regarding the use of sanctuary waters for such a large industrial project, I hope you realize that the sanctuary would be creating another 90 sq mile no-fishing zone, near a fishing dependent coastal community. It’s well understood that you can’t deploy commercial gear among the turbines and their mooring system. Sanctuary actions that lead to closing areas to fishing remains a sore subject to many fishermen.

7) With all due respect to my fellow SAC members, my seat represents the only stakeholder seat that stands to lose a portion of their livelihood to such a project. It’s hard enough to argue with BOEM, the state, and the wind energy developers without now having to defend against a sanctuary action.

8) Please do not support adding a wind energy project into the sanctuary.

9) There will be yet another closure and displacement of fishing effort that will further impact smaller areas.

Steve Haddock: Heavy wind area in Humboldt looks more favorable. Echoes the question about connecting energy to the electrical grid. Numerous environmental concerns and sees the virtual simulations as being pretty disturbing.

Karen Douglas: Wind in the Humboldt Region is very good, but other factors make the central coast more viable.

Very hard to perform transition functions in both the Humboldt and Big sur regions. There would need to be a very costly and long underwater cable from the discussion region to the Diablo Canyon Call Area. Would be happy to talk about Northern California prospects.

PJ Webb: At large representative from the southern region of MBNMS. Wants to thank everyone involved in this meeting. Supports the development of renewable energy with proper processes being followed. MBARI recently found pock marks in the Morro Bay Call Area that may prohibit the ability to build a wind farm there. Wants to make sure that onshore and ocean bottom impacts are seriously considered. Echoes sentiment north coast wind generation.

John Hunt: Wondering if anyone has the numbers that would show how many individual houses with solar panels will equal the amount of energy being produced by these proposed wind farms.

Karen Douglas: Solar is the cheapest form of energy generation. It has limitations based on the day cycles. Wind energy complements solar power as its power generation ramps up on the central coast as the sun is setting. There is an ongoing conversation about offshore wind energy across the state. It needs to meet environmental standards. Happy to follow up with desired calculations that represent a sense of scale.

VII. CLOSING STATEMENTS

Brian Nelson concludes SAC member comment section.

Brian Nelson proposes the creation of a subcommittee including at least Gary Hoffmann, PJ Webb, Kathy Fosmark, Dan Haifley, and Keith Rootsart to create a draft comment letter by 7/31/2020. Brian does not think that the current comments should stand as the only form of feedback.

Does the group support the creation of a subcommittee of at least these five people to draft a comment letter?

Catherine asks if the comment letter will be available for all members before it is sent, and Brian assures Catherine that the letter will be made available.

PJ Webb agrees to start with a subcommittee and thinks that a group webinar meeting will be helpful in drafting a letter. Asks that all present in the current meeting submit their views on the issue.

Dan Haifley supports PJ Webb's comments and wants the letter to get out sooner to SAC members so that they can send it to their constituents before there is a final vote on the issue.

Kathy Fosmark: Will the letter be based on today's comments?

Response: Yes.

Motion has been made by Dan Haifley and Kathy seconds the motion.

13 approved the motion.

Paul Michel: Thanks all those for attending and wants to get the subcommittee together as soon as possible. If MBNMS cannot make that deadline will BOEM be open to receive it after the deadline.

Eli Harland (BOEM): The comment docket will not close and BOEM is considering extending the deadline.

Doug Bourne (BOEM): Makes clear that comments from the SAC is very important and will be taken into consideration.

Bart Selby: Confirming that if a resource is taken from the sanctuary then the government has to be compensated. Would wind energy production within the sanctuary provide revenue based on this possible rule.

Paul Michel: Will follow up but there does not seem to be such a mechanism.

Meeting adjourned at 4:22 pm.

COMMENTARY - POST MEETING:

Received 7/16/20

Gary Pezzi, Recreation primary: Though a supporter of renewable energy, I do have some concerns regarding the project that came to mind during the presentation. I will share these and other concerns brought up by fellow SAC members, below:

1. My first concern was in the Process Timeline presentation where Site Assessment & Surveys were not begun by related Federal or State Agencies but handled by prospective engineering groups looking to 'win' the project. (That was my understanding anyway and if incorrect, my apologies.) That may crack open the chance for mis-information for the sake of easier implementation and/or financial gains.
2. Since the areas of consideration are not in populated areas, once the energy produce hits the on land grid I am presuming it then get distributed to the more populated, high consumption areas of the state?
3. The idea of security was brought up by a fellow member. Is that a real and on-going cost issue? Who provides it and who pays for it?
4. Is the timeline really a 9-10 year + start to installation? Seems that a lot of 'unknowns' may arise in that length of time. If so, that would drag the project on and most likely increase costs.
5. How big an impact will this project have on the commercial fishing community? Are there guidelines for fishing that might want to work the areas during and after

construction and installations?

6. What impact will this have on the fishery and habitat itself; from surface to bottom. That may a big hurdle by itself. Does that come out in the Pre-Survey Meetings/Plan ortion of the timeline?

7. I personally can accept the visual impacts that will appear (at the 15 mile out range), knowing that this is a renewable source of energy. Many may not.

However this project proceeds, I feel that Ocean Wind Energy is in our future as a society. The questions of whether this is acceptable for use within the MBNMS is another. If this discussion was around oil wells the answer would be an emphatic no! My points are only questions and concerns that conclude my commentary at this time.

Cordially,

Gary L Pezzi
Secretary, Recreation Seat f/t MBNMS Advisory Council

Received 7/17/20

Tom Rowley, Business and Tourism alternate: To Superintendent Michel and All -- Regret I was only able to participate passively during yesterday's forum on the proposed project. Overall -- It was an excellent follow-up to the background info provided previously.

I have also been following the current aero-energy project on the northshore of Island of Oahu and also the more recent proposal for a similar land-based project in southwest Oahu on using naturally occurring updraft winds from the Waianae Mountains. While land based, the use of wind energy has been long-been identified as having great potential for generating wind power, but numerous technical issues -- especially the cost of connecting efficiently to the existing power grids limits achieving the full potential... Similar technical issues exist for sea-based projects.

My personal opinion is to continue to provide Sanctuary support and participation in future studies and forums. The long-term goal is worthy, but the successful technical details to achieve a cost-effective system for either land-based or sea-based systems have a long way to go! (NOTE: I am aware of the land-based systems currently in use in the Palm Springs / Palm Desert Area.)

Respectfully submitted,
Tom Rowley, MBNMS Advisory Council (Alternate for Business / Industry)