DOCKETED	
Docket Number:	17-MISC-01
Project Title:	California Offshore Renewable Energy
TN #:	234958
Document Title:	Joel Merriman Comments - Offshore Renewable Energy, Docket Number 17-MISC-01
Description:	N/A
Filer:	System
Organization:	Joel Merriman
Submitter Role:	Public
Submission Date:	9/30/2020 8:14:13 AM
Docketed Date:	9/30/2020

Comment Received From: Joel Merriman
Submitted On: 9/30/2020
Docket Number: 17-MISC-01

Offshore Renewable Energy, Docket Number 17-MISC-01

Additional submitted attachment is included below.

AMERICAN BIRD CONSERVANCY

Bringing back the birds

30 September 2020

California Energy Commission
Docket Unit, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Offshore Renewable Energy, Docket Number 17-MISC-01

To Whom It May Concern,

We appreciate the opportunity to provide these comments on the Additional Considerations for Offshore Wind Energy off the Central Coast of California (Docket number 17-MISC-01).

American Bird Conservancy is a 501(c)(3), non-profit membership organization whose mission is to conserve native birds and their habitats, working throughout the Americas to safeguard the rarest bird species, restore habitats, and reduce threats. ABC has over 10,000 members and supporters, including 1,200 members in California. We have been working with stakeholders to promote bird-smart wind energy development practices for over 10 years.

To date, there are no commercial-scale offshore wind facilities in the United States. While there is considerable buildout of this industry in Europe, impacts to birds there have been minimally studied. Primary impacts include collisions with turbines, displacement from areas of otherwise suitable habitat, and barrier effects, where turbines create an obstacle between important use areas. We take this opportunity to provide input on the action being considered, i.e., whether or not to consider an additional area for development off the central California coast, as well as to provide general recommendations for minimizing impacts of offshore wind development.

We support, and are excited by the promise of offshore wind energy. But this must come with a full understanding of the impacts to birds and other wildlife, and a plan to monitor and mitigate these impacts.

Collision Risks

Bird collisions at offshore wind facilities have been minimally studied when one considers the temporal and commercial scale of the industry in Europe. For example, Skov et al. (2018)[1] conducted what is considered one of the most robust studies to date, and this consisted of cameras on two turbines in the interior of a single facility. They found that of 15 birds that were documented flying perpendicularly to the rotor blades within the rotor-swept zone, 6 (40%) collided with the turbines. In general, it is unclear to what degree the results of European studies apply in the U.S. Are the study locations comparable to the locations being considered on the Central Coast of California in terms of the density of birds? Do the species documented there behave similarly to the birds at the Central Coast locations? Are there

[1] Skov et al. 2018. ORJIP Bird Collision Avoidance Study. The Carbon Trust, UK. https://www.carbontrust.com/resources/bird-collision-avoidance-study

weather or other conditions at the Central Coast locations that might lead to a greater number or proportion of strikes? Do different turbine heights and spacing affect risk?

We encourage the agencies to work with seabird experts to assess data needs and implement a research plan to inform facility siting, planning, and adaptive management such that impacts of offshore wind energy facilities in California can be minimized.

Post-Construction Collision Monitoring

There is not yet any fully validated, commercially available technology available to monitor bird collisions at offshore wind facilities. This makes it challenging to evaluate the impacts of offshore wind and whether it is "sustainable" with regard to marine birds. However, there are systems that have been used to varying degrees of effect, and there are a number of systems that are being further evaluated. We recommend that the agencies work with stakeholders to bolster research on this technology until a satisfactory and feasible solution is identified. In the meantime, we recommend that the agencies commit to utilizing the best available technology to monitor bird collisions once facilities are constructed.

We further recommend that all facilities be required to make bird collision data publicly available, providing transparency and an opportunity for informed discussion about minimizing impacts as this industry grows. Finally, we recommend that all facilities be required to commit to upgrading to improved collision monitoring technology when it becomes available as part of an adaptive management strategy.

Compensatory Mitigation

Given current technology, there are no viable options to effectively minimize the impacts of a project to the extent needed to protect birds from harmful impacts. Thus, compensatory mitigation is needed to offset adverse impacts of offshore wind facilities.

Given the rich bird life off the coast of California, it seems likely that species protected by federal laws will be killed in collisions with turbines under the currently anticipated industry build-out scenario. As such, compensatory mitigation should be provided for bird mortality resulting from this development, and particularly for species of conservation concern. Specifically, we estimate based on a global database of at sea ranges (Seabird Maps and Information for Fisheries)[2], there are at least 37 migratory and resident seabird species within the wind energy area, including loons, scoters, gulls, terns, skuas, alcids, pelicans, petrels, shearwaters, storm-petrels and albatross. Among these, there species listed as Endangered under US federal laws, such as the Endangered Short-tailed Albatross, and those of international conservation concern, such as the Pink-footed Shearwater, which is listed as endangered by both Chile and Canada under the Species At Risk Act. These include 14 species ranked by the International Union for the Conservation of Nature to be Endangered, Vulnerable and Near Threatened.

We suggest a focused working group is convened to determine data gaps, and that tracking and radar studies are needed to develop an understanding of species of great abundance as well as migratory pathways and habitat used by less-studied, smaller and rare marine birds in the area, such as murrelets.

[2] https://www.fisheryandseabird.info/

There are no comprehensive datasets to determine migratory pathways or potential impact for many migratory species, such as phalaropes and shorebirds that journey to winter in South America. This is an additional area of importance for further study.

Compensatory mitigation can result in meaningful beneficial outcomes. Significant conservation investment has been made in this area to protect and enhance seabird populations, taking decades of work and millions of dollars. Secondly, compensatory mitigation can also appropriately compensate for losses of migratory species in distant countries where those species originate. For example, the Montrose restoration, a $63M mitigation package compensated for migratory seabirds in Mexico, efforts which in part led to the recovery and de-listing of the Pacific Brown Pelican[3], and prevented the listing of several other species.

Mitigation more effectively compensates for impacts when conducted on a project-, species- and population-specific basis. This model is encouraged for offshore wind energy development impacts. However, if a project-by-project approach proves difficult to operationalize, a compensatory mitigation fund could be developed and administered by trustees of federal agencies. Following the model of other forms of development, this would most appropriately be funded by the developers whose actions are resulting in the impacts, with funding amounts based on likely or actual impacts (see below).

Quantifying compensatory mitigation for birds should initially be based in an estimate of the number of birds that will be killed in collisions with turbines. Evaluating mitigation necessary to effectively compensate for these losses should utilize resource equivalency analysis, which accounts for the fact that birds at different life stages do not functionally equate in conservation importance (e.g., one additional hatchling does not functionally replace a breeding adult bird). This approach has been used effectively for addressing bird losses from oil spills and contaminants in California. For example, the Damage Assessment and Restoration Plan / Environmental Assessment for the Luckenbach Spill called for a number of mitigation projects to compensate for the losses of birds, in the amount of $21M (CDFW 2006)[4]. This restoration program also addressed significant loses of migratory birds by addressing compensatory conservation needs at nesting areas in Mexico, Canada and New Zealand. Quantities and supporting analyses should be re-evaluated as collision monitoring data become available, and additional mitigation provided as necessary.

Seabirds are long-lived, and have delayed maturity and low fecundity. These unique life-history traits require substantial and long-term commitment to reach the offset needed to compensate for losses (more than ten years for many species). Given that compensatory mitigation is time-consuming from concept to success, we urge the agencies to commit to conservation efforts proactively, and initiate actions as soon as possible. Effective compensatory mitigation should be considered for affected species by providing greater protection for breeding sites, wintering grounds, and non-breeding roost sites. Such projects might include the following priorities:

- Habitat acquisition for ESA-listed species that occur within the region
- Colony restoration: Protection and enhancement of breeding colonies to benefit multiple species within the California Current System (e.g., Farallon, Año Nuevo and Channel Islands)

[3] https://www.federalregister.gov/documents/2009/11/17/E9-27402/endangered-and-threatened-wildlife-and-plants-removal-of-the-brown-pelican-pelecanus-occidentalis
[4] https://wildlife.ca.gov/OSPR/NRDA/Jacob-Luckenbach

- Protection of international nesting areas for migratory birds (e.g., Canadian and Mexican Pacific Islands, Chilean Islands, New Zealand)
- Seabird disturbance reduction: Expansion of the Seabird Protection Network to southern areas to minimize other human-related disturbance to multiple species (e.g., vessel and aircraft)
- Protection of roosting sites for pelicans and terns
- Protection of key foraging "hot spots" where forage fish abundance is predictably high (see California Cooperative Oceanic Fisheries Investigations reports)

Central California Coast Discussion Area

We appreciate that the agencies are contending with considerable constraints in attempting to site wind energy facilities off the California coast. Due to the massive size of the turbines used in offshore facilities and likely environmental impacts caused by these structures, selecting appropriate sites can be challenging. However, a balance must be struck, which must include efforts to minimize impacts to birds and their marine habitat. The Monterey Bay National Marine Sanctuary (MBNMS) was designated due to the rich marine life in this part of California's nearshore marine waters. This high biodiversity value is important to all forms of life in the ecosystem, including marine birds.

We recommend that the Discussion Area which is within the MBNMS area should not be considered for offshore wind development. Instead, we encourage the agencies to focus their efforts on wind energy areas already identified, and ensure that they are planned in a way that has full buy-in from stakeholders, and decisions are based on best available science. This way, offshore wind development can proceed with minimal conflict as well as minimal impacts to birds and other marine wildlife, and the habitats upon which they depend.

We reiterate that we support offshore wind energy, but this development must come with a full understanding of the likely impacts to birds and other wildlife, and a plan to monitor and mitigate these impacts. Thank you for this opportunity to provide input. We offer to serve as a resource on issues of bird conservation priorities as you move forward with this work, and encourage you to contact us at any point for further discussion.

Sincerely,

Joel Merriman,
Director, Bird-Smart Wind Energy Campaign
American Bird Conservancy
Washington, DC