AMERICAN BIRD CONSERVANCY

Bringing back the birds

February 5, 2018

Dr. Brad Blythe, National Lead
Environmental Studies Program
Bureau of Ocean Energy Management

(703) 787-1636, brad.blythe@boem.gov

https://www.boem.gov/Inviting-Study-Ideas-for-FY-2019/

RE: FY19 Research Priorities & Potential Study Ideas – Seabirds

Dear Dr. Blythe,

On behalf of American Bird Conservancy, we would like to provide comments on the recent request by Bureau of Ocean Energy Management for Research Priorities and Potential Study Ideas for FY19, particularly with regard to reducing offshore wind facility impacts to marine birds.

American Bird Conservancy (ABC) is a 501(c)(3), not-for-profit organization whose mission is to conserve native birds and their habitats by working throughout the Americas to safeguard the rarest bird species, restore habitats, and reduce threats. ABC is committed to working with partners and resource agencies to provide conservation solutions for birds.

ABC developed the concept of "Bird-Smart" wind energy development, which is designed to minimize bird fatalities. Bird-Smart wind energy adheres to the following principles:

- Ensures turbines are located away from areas of high risk of bird collision;
- Employs effective mitigation to minimize bird fatalities;
- Conducts independent, transparent post-construction monitoring of bird deaths to help inform mitigation and;
- Calculates compensation for the loss of ecologically-important, federally-protected birds.

We also recognize and promote the immediate need for innovative, scientifically valid research aimed at developing effective methods for pre-construction risk assessment and post-construction monitoring of bird deaths.

With this background, ABC respectfully submits the following **Research Priorities**, which apply to **all regions (Gulf of Mexico, Pacific OCS, Atlantic, and Alaska)**:

1. **Determine birds at risk with best available data.** ABC supports research during pre-assessment surveys to identify areas with persistent use of marine bird for foraging and ensures areas of high risk of bird collision are identified and avoided in siting. Using the "Smart Wind" approach to determine high risk areas and determine optimal locations (siting) of both on shore and offshore wind infrastructure prior to construction. ABC recognizes that pre-construction risk assessment to determine and minimize bird impacts is a huge challenge. This requires knowledge of species distribution in time and space and also must account for changing ocean conditions, making it imperative that current data is utilized in risk analyses. For some highly migratory species, the synthesis of satellite or GPS tracking data will be the best spatially-explicit data to model (e.g., Pink-footed Shearwaters, Laysan and Black-footed Albatross).

2. **Develop and explore new technologies to detect bird collisions with offshore wind infrastructure.** Technological improvements are needed to detect birds around these structures and assess how many are colliding and or attracted by lights at night. There is a great need to need ways to assess bird kill at these facilities and the technology to automate this process. Acoustic or radar systems offer potential tools. The use of acoustic and radar surveys have proven effective in measuring nocturnal bird activity at colonies. New approaches to adapting these tools to understand offshore wind mortalities would be useful (see Study #1 below).

3. **Develop and explore new technology to minimize collisions with offshore wind infrastructure.** Answer questions such as: Are there visual or auditory deterrents to reduce collision impacts? Is there a predictable distance at which a seabird detects a fixed obstacle at sea and is able to avoid it? Can we develop and test audio/visual/ultra violet signals that will increase the detection distance and reduce potential collisions? For example, in Hawaii, a group led by Marc Travers is working to quantify and reduce avian collisions with power lines and other infrastructure using novel techniques (laser technology for minimizing powerline strikes; see Study #2 below). Appropriate evaluation of this approach may require improvement in our understanding of sensory ecology for the most vulnerable species to determine which signaling cues may be the most effective for species at risk.

4. **Determine compensatory conservation actions to benefit species adversely impacted by offshore wind development**. Many migratory bird species that are at risk of collision or, displacement by offshore wind projects occur in US waters but breed in other countries. These species are covered by international treaties such as the Trilateral Convention (US, Mexico, Canada), and the Migratory Bird Treaty Act. For example, Sooty Shearwaters spend half of the year in the California Current feeding, and yet nest only on islands in the Southern Hemisphere – New Zealand, Australia and Chile. Appropriate conservation actions must be developed to realize a population-level compensation for the losses to offshore wind farms. In some cases, the most cost-effective mitigation could involve activities at colonies outside the US, for example removing invasive predators from islands to increase breeding success for sooty Shearwaters in New Zealand.

Here we also recommend some **Specific Studies** which could be undertaken:

Determine Impacts of Offshore wind with Acoustic Monitoring –Conduct pilot project to determine the feasibility of using electronic monitoring (radar coupled with automated acoustic monitoring devices) and automated processing to detect and quantify night flying bird strikes around offshore wind facilities. Recently, CMI has used acoustic recorders to determine powerline impacts of an endangered night-flying bird in Kauai and to measure the effectiveness of potential mitigation actions. (Investigator: Matthew McKown, Conservation Metrics, Inc., Santa Cruz, CA, matthew.mckown@conservationmetrics.com)

Laser fence as deterrent for night-flying endangered seabirds – Conduct pilot study on the effects of lasers at deterring collisions on offshore wind facilities. Laser fences are currently being trialed to prevent collisions of endangered petrels and shearwaters with powerlines on the Island of Kauai. Current studies are investigating aspects of minimizing land collisions, but could be expand to sea-based wind infrastructure to determine the best possible laser beam spacing, spectra and brightness to deter night-flying birds, and minimize marine bird impacts. (Investigator: Marc Travers, Kauai Endangered Species Recovery Project, Hanapepe, HI, marc.s.travers@gmail.com)

Please contact us if you need further clarification of our "Bird-Smart" approach, or the study suggestions and recommendations we have made with regard to minimizing impacts of offshore wind on birds.

Thank you for your consideration,

Sincerely,

Hannah Nevins, Seabird Program Director, hnevins@abcbirds.org, 808-333-4469

David Wiedenfeld, Senior Science Advisor, dwiedenfeld@abcbirds.org

Brad Keitt, Director, Oceans and islands Program, bkeitt@abcbirds.org

Steve Holmer, Vice President of Policy, American Bird Conservancy, sholmer@abcbirds.org

cc:

Jeremy Potter, Pacific Studies Chief, Jeremy.potter@boem.gov

Catherine Coon, Alaska Studies Chief, Catherine.Coon@BOEM.gov

Dr. Pat Roscigno, Gulf of Mexico Studies Chief, Pasquale.Roscigno@BOEM.gov

Dr. Mary Boatman, Renewable Energy Studies Chief, Mary.Boatman@BOEM.gov