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Comments to BOEM on Offshore Wind Energy Environmental Assessment: Comments Offered by South Shore Audubon Society and New York City Audubon

On behalf of New York City and South Shore Audubon, representing more than 10,000 members living along the New York Bight, we appreciate the opportunity to submit comments on the recent Environmental Assessment document published by BOEM on the commercial wind lease issuance and site assessment activities on the Atlantic outer continental shelf offshore New York. Audubon's mission is to integrating science, conservation, policy and education, to protect wild birds and their habitat.

Energy from nonrenewable sources, such as fossil fuels, is associated with several major negative environmental impacts including habitat loss, habitat degradation, and global climate change. Audubon supports development of properly sited wind farms as a renewable energy source that helps reduce the threats posed to birds and people by climate change. We advocate, however, that wind power facilities must be planned, sited, and operated in ways that minimize harm to birds and other wildlife. In addition, wildlife agencies should ensure strong enforcement of the laws that protect birds and other wildlife.

Scientists at universities and conservation organizations like The National Audubon Society are studying the likely impacts of global climate change on different species of birds. As cited in National Audubon's recent *Birds and Climate Report*, over half of the avian species in North America are "climate endangered" or "climate threatened." One hundred twenty-six endangered species are projected to lose more than 50% of their current range by 2050; 188 threatened species will lose more than half of their current range by 2080. The Common Loon, the state bird of Minnesota, may in fact disappear from that state as its summer range moves north. It is possible that Baird's Sparrow may become extinct due to climate change. The Ruffed Grouse, Pennsylvania's official state bird, as both its summer and winter ranges migrate north, may disappear from the Northeastern U.S entirely. Climate change is transforming our entire earth—the physical environment, wildlife, ecological balances, and social relationships among people. Bird conservation organizations agree that global climate change (due to human-induced global warming) is an increasing threat to birds and, if not addressed will certainly cause the extinction of many bird and other wildlife species. The production of energy from fossil fuels needs to be replaced by sustainable alternative energy sources, such as wind power.
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The Continental Shelf of the United States, including the waters of the New York Bight, offer ideal conditional for wind energy production. But wind energy is not a 'silver bullet'. The Atlantic seaboard is a major migratory flyway for about 500 bird species. Most of the birds are flying over or very close to water. Without mindful siting based on scientific studies, offshore wind energy farms can be deadly for migratory birds in the Atlantic Flyway. Wind energy

projects should not be placed in sensitive areas for birds, including key migratory routes and stopover sites; breeding and nesting sites; areas where large numbers of birds congregate for feeding; or in sensitive habits, such as wetlands.

We hope that the proposed plan will guide the process of offshore wind farm development in a way that protects wildlife from direct and immediate impacts of the machinery as it helps create significant long-term solutions to combat climate change.

South Shore Audubon Society and New York City Audubon expect rigorous and extensive studies that will be completed over the next several years, ensuring that the planned wind farm will be well-sited – far from sensitive areas for birds, including key migratory routes, stopover sites; breeding and nesting sites; areas where large numbers of birds congregate for feeding; or in sensitive habits, such as wetlands.

The wind farm development process needs to include a way of assessing effects, including cumulative impacts, during all stages of the project. All state and federal wildlife protection laws must be enforced (Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), Bald and Golden Eagle Protection Act (BGEPA), and National Environmental Policy Act.)

Specific Comments on the EA

1) Regarding the construction of a meteorological tower, we believe it is desirable to have one installed, as it is likely to provide the maximum amount of data during the course of the site assessment studies. A tower, as opposed to a buoy, would be necessary for mounting certain necessary radar equipment. This equipment would provide important information that would be useful to the study of birds in the area of the OWED.
2) Tower lighting must comply with Manville's 2013 U.S. Fish and Wildlife Service (USFWS) Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning.
3) Regarding Table 3-5 (p.47), Biological Survey Types and Methods, we recommend that all avian surveys be undertaken for at least 3 years. Bird movement and migration can be greatly influenced by local weather conditions. A 3-year sample period will be a more powerful indicator of habitat use.
4) Regarding Section 4-21 (p.91) and discussion of the Migratory Bird Treaty Act (MBTA), we urge that the U.S. Fish and Wildlife Service be consulted and given a prominent role in researching and providing data regarding the impacts of the site assessment activates—and later possible OWED construction—on migrating birds. Bird numbers and behavior during both spring and autumn migrations should be monitored and studied throughout this entire process. Baseline data at this point is particularly important as migrant bird species do pass through areas in the proposed OWED.

5) Survey data for near-shore and off-shore movement of Roseate Terns to foraging areas are sorely lacking for the planning area. If the current EA is relying on composite maps, these are definitely inadequate for roseate terns. There are 2 main problems with this: 1. Most roseates at sea have been recorded as "unte" (unidentified tern species), with a comment) that says "flock with 20% roseates". Most models used to create the species maps ignore the comment column. 2. There are few survey data from inshore near Great Gull Island, Jones Inlet, Rockaway Beach, and other tern colonies on the south shore of Long Island. Foraging sites and post breeding aggregations (15 july - 15 September) need to be mapped for this species.

References:

Goyert, H.F., L. L. Manne and R. R. Veit. 2014. Facilitative interactions among the pelagic community of temperate migratory terns, tunas and dolphins. Oikos 123: 1400–1408

Mostello, C.S., I.C.T. Nisbet, S.A. Oswald, and J.W. Fox.2014. Non-breeding season movements of six North American Roseate Terns Sterna dougallii tracked with geolocators. Seabird 27:1-21.

6) Attention to nocturnal migration of passerines is not addressed. The technology exists to use radar to survey nocturnal migration in the area. There is some baseline information about density, direction and speed of migration over the northeast US a starting point (see references), but mapping movement across the NY Bight still needs to be done. The general data show us that the majority of birds are moving overland, but there are significantly distinct periods where over-water flights occur. It is not known what causes this, whether it is strong wind conditions can pushing large numbers of migrating landbirds offshore or if birds are flying over the water to go from MA or NY to DelMarVa Peninsula.

The four articles referenced below illustrate how these data can be collected. The Farnsworth et al (2016) and La Sorte et al (2015) us NEUS radar dataset to 1) characterize nocturnal migration across the region and highlight the changes in phenology across the season and the night and 2) study altitudinal changes and their relationship to wind and seasonality (species composition). These studies highlight the potential power of radar to identify patterns of nocturnal bird (and bat and insect potentially) migration.

Van Doren et al (2016) and Horton et al (2016) use the newest types of dual pole radar to study bird behavior in cross winds in the region, and specifically include references to offshore flights and birds flying over the Atlantic or getting drifted off the coast. These studies highlight similar power of radar, but toward a quite different end of actually understanding how birds are moving in winds.

References:

Farnsworth, A., Van Doren, B.M., Hochachka, W.M., Sheldon, D., Winner, K., Irvine, J., Geevarghese, J. and Kelling, S., 2016. A characterization of autumn nocturnal migration

detected by weather surveillance radars in the northeastern USA. *Ecological Applications*, *26*(3), pp.752-770.

Van Doren, B.M., Horton, K.G., Stepanian, P.M., Mizrahi, D.S. and Farnsworth, A., 2016. Wind drift explains the reoriented morning flights of songbirds. *Behavioral Ecology*, p.arw021.

Horton, K.G., Van Doren, B.M., Stepanian, P.M., Hochachka, W.M., Farnsworth, A. and Kelly, J.F., 2016. Nocturnally migrating songbirds drift when they can and compensate when they must. *Scientific Reports*, *6*, p.21249.

La Sorte, F.A., Hochachka, W.M., Farnsworth, A., Sheldon, D., Van Doren, B.M., Fink, D. and Kelling, S., 2015. Seasonal changes in the altitudinal distribution of nocturnally migrating birds during autumn migration. *Royal Society open science*, *2*(12), p.150347.

Thank you for the opportunity to comment on this important issue.

Sincerely,

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