



20 GILSLAND FARM ROAD  
FALMOUTH, MAINE 04105  
(207) 781-2330  
WWW.MAINEAUDUBON.ORG



March 22, 2017

Ms. Diana Heyder, NEPA Division  
U.S. Department of Energy  
Golden Field Office  
15013 Denver West Parkway  
Golden, CO 80401

Dear Ms. Heyder,

On behalf of Maine Audubon and its 30,000 members and supporters and National Audubon's Seabird Restoration Program and its 8,000 supporters, we would like to provide input on the scope of the Environmental Assessment (EA) for New England Aqua Ventus I.

First of all, we would like to request a more formal and detailed Environmental Impact Statement (EIS), as was proposed when a similar project was first evaluated in 2012 (Docket No. BOEM-2012-0049; FR Doc. 2012-19592 Filed 8-9-12; 8:45 am; BILLING CODE 4310-VH-P). That project was sited almost 20 miles away from Monhegan Island, which is a vital stopover for migrant landbirds. Based on current knowledge of the environmental issues surrounding this site, concerns about the current proposal (see bottom of page two for a list of specific issues), and the project's proximity to Monhegan Island, we believe the only possible outcome of an EA will be a finding of significant impact on the human environment. The expanded opportunity for public comment on an EIS as well as the more detailed discussions of the affected environment, of the alternatives, and of the environmental impacts and mitigation for such impacts is critical for a project of this scope and nature. Please consider an EIS for this project in place of the EA.

Generating energy from offshore wind is potentially a promising opportunity for Maine and elsewhere in the US, and National and Maine Audubon support developing renewable energy sources as long as they are sited in a way that minimize risks and impacts to wildlife and wildlife habitat. However, we know very little about how wildlife species use Maine's

coastal and offshore waters; for example, we do not know the location of foraging sites for most seabird species, including endangered Roseate Terns, bird and bat migration routes, behavioral responses to turbine activities, and the indirect and direct risks posed by offshore wind power development. Even if passing migrants avoid collisions with turbines, as has been observed at some wind sites in Europe, indirect impacts through avoidance behaviors and habitat alterations may cause cumulative damage to sensitive species. It is essential we have a greater understanding of how wildlife uses the area around the test site before permits for any turbines are issued.

Our greatest concerns about possible impacts to wildlife from the turbines include:

- Harm to federally protected Roseate Terns and other sensitive seabirds nesting and foraging nearby (collision risk, changes to foraging areas/prey base, increasing energy budgets, etc.)
- Harm to Federal and state-listed protected species that breed and pass through the Gulf of Maine, including Piping Plovers, northern right whales, Peregrine Falcons, and Bicknell's Thrush
- Harm to concentrations of migrants using Monhegan Island as a critical stopover site, especially in bad weather and poor visibility conditions
- Lack of knowledge of bird and bat migration routes through the area
- Types of surveying methodology that will be used to document migrants at the test site, particularly mortality and avoidance behavior
- Lack of knowledge about if and how migrants may avoid offshore wind farms in the Gulf of Maine and how that affects their overall energetics
- Effects on ability of species to properly orient during migration from lighting used during construction, maintenance, and operations

*We strongly recommend the following be addressed in the proposed site's EIS or EA:*

- Research on location of foraging areas used by Roseate Terns and other seabird species nesting nearby
- A thorough monitoring of migrants at the proposed site must be conducted, including:
  - o Tracking migratory pathways of birds, bats, and marine mammals during different seasons and weather conditions
  - o Ground-truthing of radar estimates for birds and bats during peak migration hours (overnight and very early morning) and in a variety of weather conditions
  - o Minimum of two years of wildlife surveys
  - o Both boat and aerial surveys
  - o Surveys must extend at least 1 km in all directions around the test site
- Impacts from lighting on migratory species and cumulative impacts to migratory wildlife from avoiding multiple off-shore wind turbines

**We also have the following specific concerns about this project, giving us further reason to request a full Environmental Impact Statement before determining whether to issue a permit:**

1. The initial assessments regarding potential effect on wildlife (e.g. radar studies of bird and bat use) done for the original proposed deployment at Monhegan are not applicable to the currently proposed work. The initial project was for a single, small (< 100 ft, including rotor swept area above the spar) turbine to be deployed for 4-6 months at a time. The current project proposes two much larger turbines (each with a 495' rotor diameter) to be deployed continuously for up to five years. The current proposal also involves multiple sites for construction of the anchoring/platform system and installation of the 'submarine' cable to the mainland.
2. Observations from the Maine Department of Fisheries and Wildlife biologists and the local birding community indicate that the area around Monhegan Island is one of Maine's most important high use areas for the state endangered Peregrine Falcon and other raptors during migration. Raptors and falcons in particular are likely extremely susceptible to collision to lighted structures during inclement weather situations (NRC 2007).
3. Monhegan Island itself is also one of Maine's most critical stopover sites for landbird migrants using coastal waters as a flight route north in the spring, including endangered/threatened species, species of special concern, and boreal species that have been particularly hard hit. Over 250 species have been reported on the island in the last five years, and Monhegan Island has been nominated as an Important Bird Area for Maine. The potential impact to a broad range of migrant songbirds, many of which are already in decline, is a big concern of Audubon organizations both within the state and across the region.
4. Both the indirect as well as direct effects on habitat and wildlife for all stages of the project, including construction, deployment, operation (maintenance, data collection), and decommissioning are of grave concerns to both National and Maine Audubon. The investment of the cable to the mainland would mark a major commitment and incentive to expand the project in the future. The effects on wildlife and commercial fishing would be greatly increased with an enlarged project.
5. Construction of the floating platforms at the Hampden site brings increased risk to disturbing an area well known for mercury contamination. This brings increased risk of releasing mercury into the food chain, including threats to Atlantic salmon, alewives, and the marine food web.
6. Increased boat traffic, barges, etc. may cause habitat displacement for birds and other wildlife throughout the entire project (minimum of 5+ years).

7. The underwater footprint will have an effect on the ocean floor both in installation and ongoing risk to diving birds such as gannets that may be attracted to schools of fish that use the installation as an underground reef. Migrating whales face similar risk.
8. Radar work associated with the original proposal for smaller blades showed that significant numbers of birds and bats would be at risk. The new project, with a sweep area of blades nearly five times larger would pose significantly larger risk. The effect of two large blades only 2.5 miles from Monhegan Island we believe poses a significant threat to one of the most important migratory stopover locations on the Atlantic coast for landbirds. Likewise, the sweep elevation clearly makes the blades a threat to seabirds such as gannets and terns. Half of Maine's federally endangered Roseate Terns nest on Eastern Egg Rock, less than eleven miles away- a distance well within the known foraging range of the species.
9. Finally, the proposal does not include any ongoing monitoring of pollution caused during the construction or follow-up monitoring of incidental kill or even use of the actual project site(s).

Following is some additional background information about the importance of the project area to a suite of wildlife species.

*Gulf of Maine Background:*

The Gulf of Maine is an internationally significant and essential coastal resource for a variety of wildlife species including federally listed species (Roseate Tern & Piping Plover, northern right whale, humpback whale, finback whale), state listed species (Least Tern, Arctic Tern, Harlequin Duck, Razorbill, Atlantic Puffin, Barrow's Goldeneye, Great Cormorant, Peregrine Falcon) and species of concern or in decline (e.g. Common Tern, Common Murre, Leach's Storm-petrel, Red-necked Phalarope, Semipalmated Sandpiper, Bonaparte's Gull, Laughing Gull). It also is an essential link in the Atlantic migratory pathway, and millions of shorebirds, songbirds, waterfowl, raptors, and other birds pass along the Maine coast and through Gulf of Maine waters during spring and fall migrations.

Unlike many of the areas in Europe with existing offshore wind energy sites, the Gulf of Maine is dotted with thousands of islands along the coast. A total of 377 of Maine's 4,500 islands (8% of all islands in Maine) are considered important habitat for seabird nesting. Forty-seven of these islands have been recognized as Important Bird Areas, part of a global effort to identify the most critical habitats for long-term bird conservation within each state and across the globe. Our coastal waters are the only nesting location in the United States for some of these species. Ten of Maine's coastal islands provide habitat for 94% of all Common and Arctic Terns and 100% of all Roseate Terns nesting in Maine. These islands are intensively managed to provide a system of multiple and alternative nesting sites when adverse conditions are present (e.g. disease, predators etc.) that may drive the birds to breed elsewhere.

*Species of Concern:*

In addition, Maine coastal islands host 90% of all Common Eiders nesting in the continental United States. Further, hundreds of thousands of migrating shorebirds, songbirds and raptors depend on Maine coastal areas during spring and fall migration, a period that comprises more than half of their life cycle. Many of these species are also federally or state listed as endangered, threatened, or of special concern. Bald Eagles are now prevalent along our coast as well. This species has recovered from endangered status and the coastal population is flourishing, having grown from a core population located in coastal Downeast Maine. Maine's Bald eagles are still under the protection of the Bald and Golden Eagle Protection Act. In addition to eagles, many other raptors, such as the Merlin and Peregrine Falcon, breed as well as migrate along and through the Gulf of Maine.

Current research in avian migration is demonstrating that the Gulf of Maine is a critical pathway in passerine migration, with much higher numbers of migrants passing through in spring and fall than biologists had previously known. Many of these birds, such as Bicknell's Thrush, are of concern and face challenges at both wintering and breeding grounds. Migrating songbirds frequently fly at an altitude of over 1,000 feet in clear weather, easily clearing any rotors from a wind facility. However, in foggy and inclement weather passerines fly lower and potentially within the rotor's zone. Gulf of Maine weather in spring and fall is frequently foggy with poor visibility, and these conditions are the most difficult to survey for wildlife, making monitoring at sites more challenging. Using radar to detect large scale movements of migrants can be very helpful, though NEXRAD radar systems operate at a relatively insensitive scale during inclement weather, and may be missing bands of migrating birds. Radar survey methods must be verified in all weather conditions and at various times of day- notably at night and in the early morning in order to catch migrating birds passing through. We recognize this provides challenges, but it is critical that we gauge the reliability of radar system detections.

The largest colony of federally endangered Roseate Terns in Maine is on Eastern Egg Rock, a seven acre island owned by the Maine Department of Inland Fisheries and Wildlife, less than 20 miles away from the proposed site. Despite decades of research and extensive monitoring, we still do not know foraging sites of these rare birds in Maine. Nesting sites elsewhere have observed Roseate Terns seeking food 20-30+ km from nest sites during the breeding season, and local prey availability can drive terns to forage farther away from nest sites (J. Burger et al., 2011). It is imperative that we have a better understanding of foraging locations of Roseate Terns on Eastern Egg Rock and elsewhere on Maine's islands before infrastructure potentially damages foraging areas, routes to feeding grounds, or migratory pathways.

*Beyond birds:*

Birds aren't the only migrants flying through the Gulf of Maine. Several bat species cross over the Gulf and some breed on Maine islands. Bat populations have declined dramatically in the region since 2009 due to the spread of white-nose syndrome (WNS), with the loss of at least 5.7 million bats in that time. Although this loss has hit residential cave hibernating bats the hardest, the potential mortality to migratory tree bats at wind farms has been well-documented, particularly in the Appalachian Mountains and the mid-Atlantic states, and

concern for this additional mortality is elevated due to the confounding mortality from WNS. Bats seem to be attracted to turbines spinning at lower speeds, and recent terrestrial wind developments in Maine have required cut-in speeds be raised to 5.0 m/sec at dusk and dawn, from April to September, to reduce potential mortality. The US Fish and Wildlife Service is currently considering listing several species of bats that breed and pass through Maine because of these dramatic declines, making them of particular concern.

### *Closing Comments*

The most conspicuous potential risk to wildlife from wind facilities is collision with the rotors and associated structures. However, offshore wind facilities may have harmful effects on wildlife because of avoidance behaviors, barrier effects, and habitat alteration, all of which can be difficult to quantify and assess in the marine environment (Dreweitt and Langston, 2006) but are important considerations for the long-term survival of sea and water birds using the Gulf of Maine. Because these varying effects are difficult to measure, it is absolutely critical that the proposed test site is demonstrated not to be in a major migratory pathway or foraging area, and pre-construction surveys must cover not only the test site, but a wide area (1 km) around the site in order to detect potential displacement (Fox et al, 2006).

Given the extent and complexity of wildlife use in the area and the increase in size and scope of the project from the earlier proposed project at the same site, once again we strongly urge you to require a full EIS rather than the shorter EA to evaluate risks and alternatives.

If construction proceeds, we recommend that Aqua Ventus is cautious with lighting at the site through construction, maintenance, and operating phases. In order to minimize risks to migrating birds, we recommend that lighting is minimal, flashing, and red.

We appreciate the opportunity to provide comments and welcome any questions you may have about our recommendations.

Sincerely,

Andrew Beahm  
Interim Executive Director  
Maine Audubon



Stephen Kress, Ph.D.  
Executive Director Seabird Restoration  
Program  
National Audubon Society

Cc: Wing Goodale; Biodiversity Research Institute  
Rebecca Holberton; University of Maine  
Mark McCollough; U.S. Fish and Wildlife Service  
Charlie Todd; Department of Inland Fisheries and Wildlife  
Linda Welch; U.S. Fish and Wildlife Service

## Literature Cited

Burger, J., C. Gordon, J. Lawrence, J. Newman, G. Forcey, L. Vlietstra. Risk evaluation for federally listed (roseate tern, piping plover) or candidate (red knot) bird species in offshore waters: A first step for managing the potential impacts of wind facility development on the Atlantic Outer Continental Shelf. *Renewable Energy* 36 (2011) 338-351.

Drewitt A.L. and R. H. W. Langston. Assessing the impacts of wind farms on birds. *Ibis* 148 (2006) 29-42.

Fox, A.D., M. Desholm, J. Kahlert, T. K. Christensen, IB K. Petersen, Information needs to support environmental impact assessment of the effects of European marine offshore wind farms on birds. *Ibis* 148 (2006) 129-144.

National Research Council - National Academy of Sciences. *Environmental Impacts of Wind Energy Projects*. (2007).