

**Position Statement**  
**on**  
**Wind Energy Development**

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**Summary Position Statement**

Mass Audubon supports the responsible planning, permitting, and production of renewable energy resources including wind energy. We believe that renewable energy resources are essential to the environmental well being of our nation and planet. Such facilities, however, must be conditioned to minimize adverse impacts to living resources. Energy conservation and efficiency are also important components of environmentally sound energy policy.

Wind energy technology can make a significant contribution to the renewable energy supply mix. Wind farms are proposed on an unprecedented scale off the coast of Massachusetts, and several land-based projects are underway as well. As this industry evolves and expands, state and federal regulatory and planning mechanisms must also evolve to ensure that new wind energy facilities will be sited, designed, and built in an environmentally sound manner.

Potential impacts of concern in relation to wind farms include direct and indirect impacts to birds, other living resources, and their habitat. The state and federal government should undertake a coordinated planning program to guide and facilitate appropriate, fair, and orderly development of the wind energy industry in Massachusetts. A statewide plan for siting wind energy facilities should be developed, with public input, resulting in a blueprint for the development of wind energy over the next five to ten years. The geographic area of this plan should encompass all lands within the state as well as state and federal waters off the Massachusetts coast. The resulting plan should identify areas where both the wind energy is commercially viable and environmental impacts are minimized.

In addition to the statewide siting plan, criteria should be developed for more precisely evaluating the site-specific environmental impacts of projects proposed within areas generally identified as probably suitable in the statewide plan. These criteria should then be applied statewide in energy facility site permitting and other applicable regulatory processes. Similarly, standardized pre- and post-construction monitoring protocols should be established to assess wind energy project impacts on birds, other living resources, and habitat. Project permits should be conditioned to enable modification if actual bird hazards unacceptably exceed predicted risks. The statewide plan should include adaptive management mechanisms providing for monitoring of early projects to inform permitting for subsequent projects.

Existing regulatory programs address many of the environmental impact issues associated with wind energy projects. Amendments to update these regulatory programs and clarify their application to wind energy projects are needed. However, projects already in the permitting process are being processed through existing regulatory programs.

State and federal leasing programs should be developed to guide offshore wind farm development, ensure appropriate compensation to the public, and avoid unacceptable conflicts with other public interests in these public trust areas. Projects occupying public lands or waters that receive regulatory permits while leasing programs are not yet in place should be recaptured for lease payments once the leasing programs are implemented. Financial security for decommissioning of facilities should be provided to ensure they will be removed when the facility reaches the end of its useful operational period of time.

This position statement identifies measures that are needed to fill gaps in state and federal oversight, in order to promote the orderly and environmentally sound development of wind energy facilities, and to compensate for use of public trust resources. A summary of issues that need to be addressed include:

- Development of a planning framework for environmentally sound site selection
- Establishment of leasing programs for use of state and federal offshore waters
- Refinements to permitting processes
- Establishment of protocols for pre- and post-construction monitoring

### **Environmental Benefits and Concerns**

Development of renewable energy resources is essential to address national energy needs and reduce the effects of climate change associated with the burning of fossil fuels. However, weighed against these needs are concerns regarding potential risks to birds and other living resources.

Avian and other wildlife risks associated with wind farms should be evaluated and addressed in terms of population level effects, taking into account particularly vulnerable species as well as cumulative effects of wind industry developments. Improved models need to be developed to better predict population effects of both individual projects and cumulative impacts of the industry as a whole.

Wind energy facility impacts on birds may include disturbance, displacement, barriers to movement, collision, and habitat loss. Such impacts need to be adequately evaluated and unsustainable population level impacts avoided. The scientific understanding of avian risks associated with wind farms is still evolving, and the precise level of risk to bird populations for any particular project is difficult to predict. Such risks are site-specific, and are also affected by the design, size, number, array, and lighting of wind towers. As wind energy technology has developed, the trend has been toward larger, taller towers and larger arrays of many towers in one location. The risk of avian impacts at wind farms are likely increased where large-scale facilities are proposed in areas frequented by concentrations of birds or along key migratory pathways.

The overall analysis of risks to birds from wind towers must be weighed against the negative environmental consequences of traditional energy sources such as fossil fuel burning facilities that have well-documented detrimental effects on birds, their habitats, other wildlife and natural resources, and human health.

Aviation warning lights also pose a risk to birds and must be carefully evaluated. The Federal Aviation Administration (FAA) requires lights on structures of 200 feet or more. The new generation of wind turbines usually require lighting. Many migratory birds such as warblers and thrushes migrate at night and are attracted to lights, especially during inclement weather. At such times, these nocturnal migrants can become disoriented and strike tall structures on which lights are mounted. Millions of birds die each year in collisions with tall buildings, communications towers, and other structures. Due to concerns regarding cumulative impacts on bird populations, the U.S. Fish and Wildlife Service (USFWS) and bird conservation groups are examining this issue at the national level. Migratory birds are protected by federal law, and endangered species are further protected by federal and state endangered species laws.

Although the USFWS has enforcement powers over facilities that cause bird deaths, there is no proactive permitting system to avoid and minimize bird collision hazards associated with wind turbines or other tall structures. The USFWS, FAA, and Federal Communications Commission have not reached consensus on solutions that would protect birds while simultaneously meeting the nation's communications and aviation safety needs. As the wind energy industry expands, the need for national standards to address these concerns becomes ever more urgent.

Wind farms may also affect other wildlife due to direct alterations of habitat or by displacing or attracting certain species. Land-based wind farms developed in previously remote areas may require construction of new access roads with associated direct and indirect impacts to land and water resources. Wind turbines erected in the ocean may affect marine life as well as birds. In addition, potential conflicts with traditional commercial and recreational uses such as fishing and boating need to be considered in planning and permitting offshore wind energy projects.

### **Statewide Planning and Permitting Criteria Needed**

There is presently no legally established wind energy siting plan or criteria, applied consistently throughout Massachusetts and offshore that would minimize environmental impacts of wind energy development. While Mass Audubon recognizes that there are regulatory programs in place to permit wind energy projects, we believe it would be beneficial to both the industry and the environment to have a comprehensive planning and siting criteria framework in place to guide projects to the most appropriate locations.

A statewide plan should be developed, identifying appropriate and inappropriate areas and/or criteria for siting wind farms. The energy deregulation law (*Chapter 164 of the Acts of 1997*) established a fund dedicated to the promotion and development of renewable energy facilities. The Massachusetts Technology Collaborative administers these funds. Some of this money has been spent mapping wind resources across the state. Development of a statewide wind energy siting plan to minimize environmental impacts would be another appropriate use of this money, as it would facilitate faster and less controversial development of wind energy facilities. The statewide siting plan should encompass all land within Massachusetts as well as state and federally controlled offshore waters. The state and federal government should cooperate in undertaking this planning process through a coordinated, comprehensive Massachusetts Environmental Policy Act/National Environmental Protection Act (MEPA/NEPA) review process, resulting in a "programmatic" Environmental Impact Report/Statement (EIR/EIS). The planning process should be open and transparent, with ample opportunity for public comment. Once a statewide plan is developed through MEPA/NEPA, it can provide a blueprint for development of wind energy projects for the next five to ten years.

Siting criteria should be developed and included in the programmatic EIR/EIS to guide wind farms to locations where bird risks and other environmental impacts are low. Statewide, consistent environmental siting criteria should be built into state and federal wind energy development planning as well as permit review processes for specific projects. For example, wind turbines should not be located in areas where bird use is especially concentrated, along major migratory corridors, or where rare or endangered bird species are likely to be impacted. The cumulative impacts of multiple wind energy projects should be considered in both statewide planning for wind farm siting and in the environmental review and permitting processes for individual projects.

Mass Audubon testified in support of Governor Romney's March 25, 2003 proposal before the Joint House-Senate Committee on Energy to establish an Ocean Zoning Task Force and will work with the administration on addressing planning issues identified in this position statement.

## **Environmental Review Processes**

Wind energy projects trigger a variety of environmental permitting processes. Permitting requirements for specific projects varies depending on the project location and scale. For example, state and local wetlands permits and/or federal review under *The Clean Water Act* may be required for projects involving impacts to wetlands or waterways. Wind farms may involve certain environmental impacts not commonly associated with more traditional types of development projects that regulatory programs were designed to address, such as access and construction on remote ridgetops and potential direct or indirect avian impacts such as disturbance, displacement, barriers to movement, collision, or habitat loss. Such impacts can be minimized through careful regulatory review as well as geographic planning and criteria that promote wind energy facility development in the most environmentally appropriate locations possible. As with any new, expanding industry, regulatory agencies and elected officials may need to clarify how existing regulatory programs apply and/or refine regulatory programs to ensure that all significant impacts are comprehensively addressed.

The Energy Facilities Siting Board (EFSB) regulates the development of new electric power facilities in Massachusetts. Massachusetts' energy deregulation law created incentives for the development of renewable energy facilities. This same law exempted the EFSB's permitting of many types of energy facilities, including wind energy projects, from the state environmental review under MEPA. Although some wind farming projects may require MEPA review because certain size or impact thresholds are exceeded, the EFSB is not required to wait for the MEPA review to conclude before issuing a siting permit. This process deprives the public and government officials of an important opportunity to review and comment on projects prior to EFSB decision-making. Intervention in the EFSB is a cumbersome legal process and is not an adequate substitute for the MEPA process, which is open, transparent, and free for participation by the general public. Therefore, a comprehensive statewide siting plan and siting criteria are needed and should be prepared through the MEPA/NEPA process as described above.

Pre-construction surveys should be required, documenting habitat and bird activity in the vicinity of any proposed wind farm. Post-construction monitoring should be required to document the level of actual bird mortality and other impacts associated with a facility once constructed. As much as possible, standardized methods of data collection should be applied. Pre- and post-construction monitoring standards should be established in the comprehensive EIR/EIS.

Monitoring data should be compiled and reviewed on an ongoing basis to help advance the scientific understanding of wind farm effects, particularly interactions between birds and wind farms. Contingency mitigation plans should be required before projects are constructed, establishing thresholds of avian mortality, which if exceeded would require specific mitigation responses. The statewide plan for wind farm development should include adaptive management mechanisms providing for feedback of data on the impact of early projects in reviewing, permitting, and conditioning later projects. Plans and funding for decommissioning of projects when they reach the end of their operational lifespan should be required.

## **Public Lands and Waters**

Offshore projects would occupy state or federally owned public trust resource lands (submerged lands, waters and the air above state waters and/or the Outer Continental Shelf)<sup>1</sup>. There are no state or federal leasing programs in place to determine which areas are and are not appropriate for wind energy projects, to compensate the public for construction of facilities occupying public lands, or to provide an open marketplace for private companies to bid competitively for use of specific areas. The absence of comprehensive siting and leasing programs for offshore wind projects in federal waters is already leading

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<sup>1</sup> Areas up to three miles offshore are under the jurisdiction of the Commonwealth of Massachusetts; those between three and 200 miles offshore are controlled by the federal government.

to legal disputes regarding whether or not the Army Corps of Engineers has the authority to issue permits for such projects. There is a federal program for leasing of certain offshore areas by the oil and gas industry (although no such projects exist off the Massachusetts coast at present). This program provides funding distributed by the federal government to states for protection of land and water resources, and has been used successfully to fund public conservation land acquisition projects. Similar leasing programs should be established for offshore renewable energy projects. These programs should include geographical planning with public input to determine locations where wind energy is appropriate, and a competitive bidding process should determine which companies are allowed to lease those sites. A similar state planning and leasing program should be undertaken for areas within commonwealth waters. State and federal planning and leasing programs should be coordinated as much as possible, as described above through a combined MEPA/NEPA review process.

It is conceivable that wind energy proponents may propose projects on publicly owned park or forestlands. Public conservation ownership of lands should be a strong criterion against siting of wind farms in such locations. Construction of wind turbines is a commercial/industrial type of development and would constitute a change in use of lands acquired for the public purposes of natural resources conservation and recreation. Any such wind energy project for state lands should be subjected to the same rigorous requirements for any other project involving a change in use of "Article 97" (public conservation) lands, including provision of compensation of equal conservation and monetary value to offset impacts to publicly owned natural areas. The full impact of such projects should be taken into account, including direct impacts as well as changes in habitat and indirect effects of increased accessibility in remote areas where new access roads and utility lines would be involved. These considerations should be incorporated into the statewide wind energy planning process.

### **Proposed Projects Presently Undergoing Permitting**

Wind energy projects are already being proposed in Massachusetts, including several large-scale offshore projects (Cape Wind and Winergy) and some smaller projects on land. State and federal planning, siting criteria, and leasing programs need to be developed as soon as possible to help guide and manage development of the wind energy industry in Massachusetts, both on land and offshore. If projects are permitted and built in public trust waters before the offshore leasing programs are in place, such projects should nevertheless be subjected to lease payment requirements once the leasing program is defined.

### **Mass Audubon Involvement:**

Mass Audubon has submitted comments to federal, state, and local agencies and project proponents in response to several wind energy projects including the Cape Wind project, and we will continue to participate in environmental review and permitting processes. With grant funding from the Massachusetts Technology Collaborative, Mass Audubon is also conducting independent bird surveys in Nantucket Sound to supplement the Cape Wind sponsored surveys. Further information on Mass Audubon's involvement in the Cape Wind project is available in a separate position statement on that project.

Mass Audubon testified in favor of a bill **S. 380**, *An Act Relative to the Production of Wind Energy in Massachusetts Waters*, sponsored by Senator Robert O'Leary (D. Cape & Islands). This bill would direct the Massachusetts Executive Office of Environmental Affairs and the Department of Energy Resources to conduct a study of the feasibility and impacts of wind energy in Massachusetts. Our testimony requested that the scope of study be expanded to include land-based as well as offshore wind energy development. Mass Audubon also supports Secretary of Environmental Affairs Ellen Roy Herzfelder's proposal to establish an ocean zoning task force that would recommend appropriate zones of use for wind energy and other projects in Massachusetts waters. We are actively promoting federal and state cooperation in ocean zoning planning initiatives, to address both state and federal offshore waters in a coordinated fashion.