



January 29, 2008

Secretary Ian A. Bowles
EOEEA, Attn: MEPA Office
Deirdre Buckley, EOEEA # 14161
100 Cambridge Street, Suite 900
Boston MA 02114

Re: **EOEEA #14161 Hull Offshore Wind Project**

Dear Secretary Bowles:

On behalf of Mass Audubon, I submit the following comments on the proposed *Hull Offshore Wind Project* proposed by the Hull Municipal Lighting Plant (HMLP). This is the first non-industrial size wind farm (4 turbines) proposed in Massachusetts waters and first proposed outside of any statutorily designated state ocean sanctuary. Thus the strict application of existing environmental standards in relation to the size, timing and location of the project is critical, as this will set a precedent for future projects off the Massachusetts coast. The project is receiving up to \$1.7 million in funding from the Renewable Energy Trust through the Massachusetts Technology Collaborative.

According to the ENF, "*The HMLP has agreed to provide the MEPA office with a draft and final Environmental Impact Report for the Project.*" We support this commitment to preparation of an Environmental Impact Report (EIR). We recommend that it be prepared in accordance with a scope that is a scaled-down application of the relevant measures identified by the Secretary in the March 19, 2007 Certificate on the Cape Wind FEIR. Furthermore, the Scope for the EIR should include the following, with specific protocols scaled appropriately to the size of the project:

- Phase I assessment of impacts to birds and bats, utilizing information from the literature and existing data from the project area and surrounding vicinity;
- Additional evaluation of risks to federally and state-listed bird species;
- Pre- and post-construction avian and bat monitoring, for a minimum of one to two years post-construction;
- Clearly defined mitigation measures and funding commitments;
- Compensation for use of public lands and waters; and
- Decommissioning plans and funding.

There are many uncertainties regarding the risks to birds and bats from wind farms, as identified in a recent report (National Research Council [NRC]. 2007. *Environmental Impacts of Wind Energy Projects*. The National Academies Press, Washington, D.C. USA). While the absolute environmental impact of any one project of this scale may be relatively small, the cumulative impacts of numerous projects of this scale may be significant. Studies that document siting and design factors that reduce or increase risk are needed to guide the development of wind energy projects in an environmentally sustainable manner.

As with the *Cape Wind Energy Project* at Nantucket Sound (**EOEEA #12643**), Mass Audubon reviews the *Hull Offshore Wind Project* at Hull, MA (**EOEEA #14161**) in the context of the threat of rapid climate warming, oil spills, strip mining, air pollution, and the push for nuclear power as a clean energy source. We know that the combustion of fossil fuels releases greenhouse gases, including carbon dioxide and methane, that accumulate in the lower atmosphere and rapidly heat the earth. Combustion of fossil

fuels also results in the release of mercury that bioaccumulates in the environment, causing health problems for humans, especially pregnant women and children. Rising sea levels caused by warming flood low-lying barrier beaches and islands that serve as critical habitat for coastal birds, including the endangered Roseate Tern and threatened Piping Plover.

To combat the threat of climate change, increases in energy conservation and efficiency are a first priority. The clean renewable energy industry also needs to grow as quickly as possible to mitigate the effects associated with rapid climate change. Of all the renewable energy technologies available today, wind energy is the fastest growing, most successful, and most readily available.

Mass Audubon's technical review and assessment of the *Town of Hull Offshore Wind Project* will focus primarily on the project's impacts on birds and their habitat in the marine environment, and on bats. Our review standard continues to be that offshore wind energy projects pose no ecologically significant threat to living marine resources. This does not mean zero impact on those resources because the production of energy always entails some level of environmental impact.

We recommend that a full Environmental Impact Report (EIR) be prepared for this project as:

1. This is the first of its kind;
2. The associated environmental benefits and negative impacts are unknown;
3. The Commonwealth's review of this project will set the standard by which future wind farms in state waters will be reviewed. It is therefore important that we as a state get this project right in order to further promote the renewable energy industry in Massachusetts and successful application of its technologies at the municipal level; and
4. The Massachusetts Environmental Collaborative is providing up to \$1.7 million in funding from the Renewable Energy Trust to support environmental and engineering studies for this project.

State Protocols for Monitoring Wind Projects

We recommend that EEA establish standard pre- and post-construction monitoring protocols for projects of small, medium, and large scale.

Massachusetts currently has no accepted set of guidelines for evaluating wind energy projects. Several states have recently developed such guidelines including California, Michigan, New Mexico, and Washington state, and the EIR could use aspects of these guidelines as they are relevant to the details of this project. In addition, a new Federal Advisory Committee will convene for its first meeting in late February to develop national guidelines for wind energy projects.

California's guidelines provide a framework for evaluating projects based on the results of a preliminary screening, and these guidelines provide a useful framework for determining the level and intensity of data collection during the EIR (California Energy Commission and California Department of Fish and Game. 2007. *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report.* California Energy Commission, Renewables Committee, and Energy Facilities Siting Division, and California Department of Fish and Game, Resources Management and Policy Division, CEC-700-2007-008-CMF.)

Scope for the EIR:

An EIR should be required, with a scope that is a scaled-down application of the relevant measures identified by the Secretary in the March 19, 2007 Certificate on the Cape Wind FEIR.

The EIR should define an avian and bat pre- and post-construction monitoring program that is appropriately scaled to its size. The protocols and scope for this monitoring program should be designed to be reasonable in cost for the scale of the project while providing essential and useful information to accurately measure, avoid, minimize, and mitigate impacts. Post-construction monitoring should occur for at least one to two years. Any post construction monitoring after the first year or two, and a determination as to whether monitoring needs to continue, should be based on the results of initial monitoring per adaptive management principles.

The ENF indicates that a Phase I Avian Risk Assessment will be conducted and that this will be utilized to identify any additional information that may be needed to evaluate potential impacts. The scope of this assessment and criteria for determining additional study needs should be clarified in an EIR. Bats should be included in this Phase I assessment. The Phase I assessment should also include information on post-construction monitoring of the existing two land based turbines in Hull.

Rare and Endangered Bird Species in the Project Area: The ENF mentions several state-listed bird species known to occur in the general vicinity of the project. However, the information in the ENF is incomplete both in terms of the species mentioned and the analysis of potential impacts. Two federally listed species, the piping plover (state and federally Threatened) and roseate tern (state and federally Endangered) may occur in the project area, although no systematic surveys are available in the immediate location. Piping plovers have been documented on islands within the Boston Harbor Islands National Recreation Area during migration. Common tern, a state-listed Species of Special Concern, breeds on Spinnaker Island, within approximately two miles of the project. Common terns and least terns (Special Concern) breed on several of the Boston Harbor Islands. Common loon (Special Concern) has been observed in the vicinity during winter and on migration. Two species listed as Endangered by the state, the peregrine falcon and bald eagle, have been seen on the Boston Harbor Islands, as has the northern harrier (state Threatened). The ENF notes the presence of some but not all of these species in the general area. It does not adequately evaluate potential risks to these species, particularly during migration or daily migratory movements across the coastal waters where the turbines will be located.

The EIR should define a one-year pre-construction monitoring program for bird and bat activity at the site in addition to the Phase I risk assessment described above. Inventory and monitoring of the site should focus on offshore migration of birds and bats during spring and fall seasons, nesting season activity of common terns nesting on nearby Spinnaker Island, least terns nesting within the Boston Harbor Islands Recreation Area, ospreys, and winter distribution and abundance of winter waterfowl. Bat activity assessments should involve the use of multiple bat detectors mounted on a tower erected within the project area – at minimum detectors should be set at the height of the rotor swept zone.

The ENF states that bat populations of the species found in Massachusetts are generally robust throughout their range. It is our understanding that data on the status and trends in bat populations is scarce and incomplete (Kunz, T.H., E.B. Arnett, W.P. Erickson, A.R. Hoar, G.D. Johnson, R.P. Larkin, M.D. Strickland, R.W. Thresher, and M.D. Tuttle. 2007. *Ecological impacts of wind energy development on bats: Questions, research needs and hypotheses*. Front. Ecol. Environ. 5(6): 315-324). Bats may be found offshore either foraging or migrating, and recent data suggest that bats may be prone to collision with wind turbine rotors, perhaps because they are attracted to the turbines (NRC, 2007). The EIR should summarize what is known about risks to bats from turbines. Pre- and post-construction bat monitoring should be conducted for the proposed project.

The ENF indicates that the applicant intends to design and implement avian studies with USFWS and Mass Audubon following the Phase I assessment. We look forward to hearing from the applicant about potential consultations on this topic, as we have not yet had any conversations with the applicant about

this. As stated above, design protocols for these studies and consultation measures should also be included in the EIR.

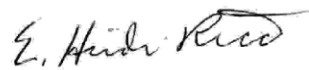
The EIR should identify adequate, well-defined, and enforceable mitigation measures for implementation in the event that the project results in unanticipated and ecologically significant adverse impacts.

The EIR should discuss what, if any, compensation for the use of public lands and waters of the Commonwealth will be paid to the Commonwealth by the project proponent Hull Municipal Lighting Plant.

Finally, the EIR should spell out enforceable procedures and bonding authority for decommissioning of any abandoned facilities should be established in accordance with any regulatory approval for the wind turbine project.

Thank you for considering these comments.

Sincerely,



E. Heidi Ricci
Senior Policy Analyst

cc: Philip Lemnios, Hull Town Manager
MassWildlife
USFWS
Sue Reid, CLF