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April 20, 2007

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Town of Orleans Wind Energy Project
PROJECT MUNICIPALITY : Orleans
PROJECT WATERSHED : Cape Cod
EOEA NUMBER : 13992
PROJECT PROPONENT : Massachusetts Technology Collaborative, Renewable
Energy Trust
DATE NOTICED IN MONITOR : March 21, 2007

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

The project consists of the installation of two, 1.65-megawatt (MW), 397-foot tall wind turbines on the Town of Orleans' public watershed to provide electric power in support of watershed activities and the supply and treatment of potable water for the residents of Orleans. Supplemental information provided by the Town of Orleans Water Commission (comment letter dated April 4, 2007), estimates that based upon an annual energy generation of 7,600 mega-watt hours (MWh), the two turbines will avoid approximately nine tons of SO₂, 2.4 tons of NO_x, and 4,900 tons of CO₂ emissions. I commend the proponent and the Town of Orleans for their commitment to renewable energy development and their leadership in promoting the use of wind energy for municipal use.

The project is proposed within the watershed, which was taken by the Town of Orleans in March 1962 for the purpose of supplying water to the Town's residents. As such, activities

involving a change in use or change in control of any land in the watershed, in this case a long-term land lease, are subject to the requirements of Article 97 of the Massachusetts Constitution. The project will require land clearing associated with the construction of access roadways and wind turbine sites in the magnitude of approximately six acres, with approximately two acres being restored to a vegetated state post-construction. The project area does not contain wetland resource areas or areas designated as *Priority or Estimated Habitat* by the Natural Heritage and Endangered Species Program (NHESP). However, the entire project area is located within the watershed for the Town of Orleans, which contains six groundwater wells that pump water from the Monomoy Lens. Therefore, additional care must be given to operations within the watershed due to its sensitive nature as a water supply protection area. The proponent has presented the preferred alternative within the ENF subsequent to several feasibility studies conducted to determine the ideal location and number of wind turbines in the watershed. Off-site alternatives for the project were limited due to the primary project goal of providing energy to watershed related activities. The proponent did investigate providing energy to additional municipal buildings, but cost and feasibility due to the distance between the turbine and project sites dismissed these alternatives.

The project is undergoing review pursuant to Section 11.03 (1)(b)(3) and Section 11.03 (1)(b)(5) because the project is receiving state funding and will involve the conversion (and in this instance this is construed as change in control) of Article 97 lands and a release of interest in land held for watershed preservation purposes. The project may require a curb cut permit from the Massachusetts Highway Department (MassHighway) for revised access from Route 28. The project will require approval from the Massachusetts General Court for the proposed "change in control" for lease of land to a private developer on Article 97 land.¹ The project will require National Pollutant Discharge Elimination System (NPDES) Construction General Permit from the United States Environmental Protection Agency (U.S. EPA) for alteration of greater than one acre of land. Additionally, the project will require confirmation of Aeronautical Clearance from the United States Federal Aviation Administration (FAA), approval from the Town of Orleans Board of Water Commissioners and Board of Selectmen, as well as a Special Permit from the Orleans Planning Board.

The project will receive state funding from the Massachusetts Technology Collaborative (MTC), a quasi-state agency. Additionally, as the project involves the issuance of a long term land lease of Article 97 lands, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment.

Energy

The project does not require approval from the Massachusetts Energy Facilities Siting Board (EFSB), as its estimated power generation capabilities are below associated EFSB thresholds, at 7,600,000 kilo-watt hours per year. The project will supply power to the on-site iron and manganese removal plant (I&M plant) and various watershed activities. It is anticipated that these demands will require approximately eight to ten percent of the energy generated by the two turbines. The remaining power will be sold back to the larger power grid operated by NSTAR for use in wholesale markets. The project site is proximate to NSTAR transmission

¹ Approval from the General Court does not constitute Agency Action for purposes of MEPA review.

lines and the proponent has filed for interconnection with NSTAR infrastructure to accommodate the project once it comes online.

Article 97 Land

The project will require the execution of a long term land lease to a private entity on municipally owned Article 97 lands. The proponent has outlined in the ENF how the project is consistent with the Executive Office of Environmental Affairs' (EOEA) Article 97 Land Disposition Policy, dated February 19, 1998. This consistency includes the investigation of alternative wind turbine siting locations, avoidance of unique or significant resources, and compatibility with watershed uses. The Town of Orleans has promulgated a Commercial and Non-Commercial Wind Facilities Bylaw, outlining height restrictions, noise limits, and setback criteria. The Town will also establish Protective Conditions, a draft of which was included in the ENF, to reduce or avoid impact to the watershed or any unique or significant resource areas. In addition to approval of the State Legislature, any specific land lease or license issued for the construction of or operation of the project will be subject to the approval of the Orleans Board of Selectmen and Board of Water Commissioners.

Land Alteration

The project will require the clearing of roughly six acres of land throughout the approximately 500 acre watershed to facilitate the construction of access roads and wind turbine installation and operation. The amount and location of land alteration is dictated by manufacturer's specifications associated with the delivery and installation of the wind turbines themselves, which are shipped in large pieces and assembled on site. Due to the length of the turbine blades and transportation vehicles, changes in slope along the access roadways are limited to gradual slope changes over longer distances to prevent truck beds from bottoming out. Under existing conditions, the access road from Route 28 is approximately 16 feet in width, unpaved, and lined with mature vegetation. Each access road will be widened to approximately 20 feet in width, with adjacent grading areas to avoid the placement of retaining walls. Vegetation will be removed within these roadway and grading areas. Furthermore, an access road will be constructed from the primary access road from Route 28 to turbine Site 1, resulting in the placement of fill excavated from the regrading of the primary access road. An additional access road will be extended from turbine Site 1 to turbine Site 5, also 20 feet in width, with some minor areas of fill to moderate elevation changes along its route. Excavation and fill areas will result in the movement of earth within the project area itself, with no anticipation of earth exportation or importation to achieve the desired final roadway grades.

Each wind turbine site will require the clearing of vegetation around the turbine base approximately 250 feet by 225 feet in area. Site 1 has already been largely cleared, as this site is the same location as the MET tower installed as part of the site feasibility study. Site 5 will require the clearing of large trees around the turbine site. The proponent intends to plant low vegetation such as native grasses or shrubs near each turbine site to restore vegetation and habitat area, while preserving the ability access each turbine for maintenance and operations.

Water Supply

The project site is located entirely within the 500 acre Town of Orleans watershed. MassDEP has stated in their comment letter that since the wind turbines will supply the I&M plant and the New England Power Grid, the proposed activity would therefore be considered to be related to public water supply. MassDEP indicates that as presented in the ENF, the construction and operation of the wind turbines is not expected to have an adverse impact to water quality. In accordance with draft Protective Conditions outlined within ENF, the proponent must develop a spill response plan for equipment used during the construction and operation of the wind turbines.

Stormwater

The project access roads will not be paved and will not contain catch basins or other similar stormwater management infrastructures. Stormwater from the access roads will be channeled via vegetated swales or other country drainage-type measures. The proponent will be required to obtain a NPDES Construction General Permit and prepare an associated Stormwater Pollution Prevention Plan to control stormwater flows during construction.

Wildlife

The ENF included a Phase I Avian Radar assessment followed by spring and autumn migration (radar) assessments at the project site. The Phase I study concluded that the project would pose low risk to birds and resident bats, while an analysis of the radar data concluded that the project would pose a low mortality risk to birds. The project should incorporate the recommendations made by these studies in an effort to further reduce risk to birds and bats. These mitigation measures should include the use of underground wires for connection to the I&M plant and NSTAR transmission wires, the minimum amount of navigational safety lighting as allowed by the FAA and the Massachusetts Aeronautics Commission, and the installation of turbines that minimize the use support ladders or other appurtenances that may encourage the roosting of birds. Additionally, as mentioned previously, the proponent should allow vegetated areas cleared for turbine placement to regenerate as closely as possible to the turbines, roads and other infrastructure to avoid habitat fragmentation. I am confident that given the depth of study performed with regard to avian and bat risk, that the project can be constructed in a way that minimizes or avoids damage or injury to wildlife and their habitat. The proponent has indicated that post-construction monitoring is not proposed at this time. However, I recommend that the proponent revisit this possibility during the local approval process if requested by local review authorities.

Air Quality

A primary benefit of the project is the anticipated offset in emissions in lieu of a conventional power generating system. Supplemental information provided by the Town of Orleans Water Commission (comment letter dated April 4, 2007), estimates that based upon an annual energy generation of 7,600 mega-watt hours (MWh), the two turbines will avoid

approximately nine tons of SO₂, 2.4 tons of NO_x, and 4,900 tons of CO₂ emissions. This information indicates an overall project benefit to regional air quality.

Navigation

The proponent should consult with the Chatham Municipal Airport and the Federal Aviation Administration (FAA) regarding approvals needed for the proposed project, and to determine whether the height of the wind turbine or other aspects of its design would interfere with the airport's runway approach or any known flight paths. As indicated at the MEPA site consultation session, the proponent has already received confirmation from the FAA that the project would not result in a hazard to navigation, but this confirmation was for an alternative turbine layout. The proponent must amend their request to the FAA and receive a negative determination of flight hazard from the FAA for the alternative presented in the ENF prior to project construction.

Furthermore, the proponent should seek approvals from the FAA to install the minimum amount of lighting that the agency views as necessary to ensure an appropriate level of aviation safety.

Traffic / Access

The project will require access from Route 28, a state-controlled highway. It is anticipated that the access road to the wind turbine sites can utilize the existing curb cut to the I&M plant. However, it may be necessary, given manufacturer's requirements, that the curb cut be modified or relocated slightly to facilitate delivery of the wind turbine components. If the curb cut must be modified or relocated, the proponent will require a curb cut permit from MassHighway. Furthermore, given the size of the turbine components, the project will require coordination efforts and permits from MassHighway and/or the Town related to lane closures, etc., during the delivery process. The proponent should continue to coordinate with MassHighway and Town officials regarding the use of public roadways for project construction purposes.

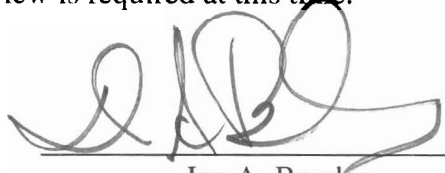
Decommissioning

The proponent should develop a decommissioning plan for the project as part of the local review process. I would recommend that such a plan include a funding mechanism for decommissioning, a notification process to the local community and interested parties, as well as a plan to allow turbine sites to be restored to their natural state. I am satisfied that the local approval process under the Orleans Wind Bylaw will lead to development of an appropriate decommissioning plan.

Based on the information in the ENF and after consultation with relevant public agencies, I find that the potential impacts of the project and appropriate mitigation can be addressed during the permitting process. No further MEPA review is required at this time.

April 20, 2007

DATE



Ian A. Bowles

Comments Received:

03/29/2007 Mary Jane Curran
04/02/2007 Commonwealth of Massachusetts Division of Marine Fisheries
04/04/2007 Kevin Galligan, Town of Orleans Water Commissioner
04/05/2007 Robert and Margaret Wineman
04/09/2007 David C. Brinning
04/10/2007 Massachusetts Department of Environmental Protection - SERO

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