



Department of Energy

Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3305

December 18, 2008

TO: Distribution List

SUBJECT: Notice Of Scoping – Mount Wachusett Community College Wind Energy Project, Gardner, Massachusetts

The U.S. Department of Energy (DOE), in compliance with the National Environmental Policy Act (NEPA) of 1969, plans to prepare an Environmental Assessment (EA) for the proposed Mount Wachusett Community College (MWCC) Wind Energy Project in Gardner, Massachusetts.

Pursuant to the requirements of NEPA, the Council on Environmental Quality regulations for implementing the procedural provisions of NEPA (40 CFR parts 1500-1508), and DOE's implementing procedures for compliance with NEPA (10 CFR Part 1021), DOE will prepare a draft EA to:

- Identify environmental effects of implementing the proposed action (construction of up to 2 wind turbines);
- Evaluate viable alternatives to the proposed action, including a no action alternative;
- Describe the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity;
- Characterize any irreversible and irretrievable commitments of resources that would be involved should this proposed action be implemented.

Pending completion of the EA, DOE proposes to provide Congressionally Directed Federal funding to MWCC for the construction of the wind turbines.

Project Location and Proposed Action

MWCC is located on a 300 acre state-owned site in Gardner, Massachusetts. The College proposes to install and operate up to 2 grid-connected megawatt scale wind turbine electric generators on campus to offset power purchases. The College has developed a renewable energy curriculum and is a recognized leader in the use of clean energy technology. The College has installed a biomass fired heating system, a biomass gasification and cogeneration system, and a photovoltaic array on the roof of the main building.



The proposed location for the wind turbines is the site of the current meteorological test tower, as shown on Figure 1, Project Locus and Figure 2, Project Site. The site would not require significant site preparation or tree clearing. It is close to the primary electric load center for the college, and is at a maximum distance from residential neighborhoods.

The specific turbine model has not been identified but would be up to 2.1 megawatts (MW) each. The types of wind turbines being considered turn at a maximum rate of approximately 32 revolutions per minute. The proposed turbines would be installed on monopole towers with a total height to the top of the blade arc a maximum of 415 feet above ground level (AGL). Final height and blade diameter determination will be made through an evaluation of optimized turbine power output and cost/availability. Power transmission from the turbine site to the interconnection at the main meter room for the campus would be through underground cable. Installation of the cable would consist of trenching within previously disturbed areas such as the open field, the two lane campus access road and lawn areas. A transformer would be installed near the base of the wind turbine. A short, narrow gravel service road, likely along the existing access for the met tower, would be constructed from the nearby campus access road to allow for construction and maintenance.

The project is approximately 3 miles from Gardner Municipal Airport. A Determination of No Hazard to Air Navigation has been issued by FAA for the 415 foot maximum height. The structure will be lighted in accordance with the FAA Advisory Circular on Obstruction Marking and Lighting.

Development of Reasonable Range Of Alternatives

A range of turbine heights and alternative site locations on the campus have been evaluated that considered cost and environmental impacts. The alternatives will be discussed in the EA along with the No Action alternative. The draft EA will identify the Preferred Alternative.

Probable Environmental Effects/Issues Scoped for the EA

The EA will describe all potential impacts on the environment caused by the project and will identify mitigation measures that will be incorporated into the project design to reduce or eliminate those impacts. An Environmental Overview was completed as part of the Feasibility Study prepared for the project. The following elements of the environment have been identified as potential impact categories:

- Wetland Resources
- Water Quality
- Visual

- Noise
- Electromagnetic Interference (EMI)
- Aviation
- Birds/Bats
- Pedestrian Safety and Risk Assessment

Early coordination has been carried out with the Massachusetts Historical Commission (MHC), the Massachusetts Division of Fisheries & Wildlife, Natural Heritage and Endangered Species Program (MDFW, NHESP), and the US Fish and Wildlife Service (USFWS). In a response to MWCC's Project Notification Form dated February 26, 2008, MHC determined that the project is unlikely to affect significant historic or archaeological resources. A Phase 1 Bat Risk Assessment, an Acoustic Monitoring Program, a Phase 1 Avian Risk Assessment and a Nesting Bird Census have been completed.

Summary of Avian Studies

The project site is located in a currently mowed field on the outskirts of an urban center. Habitat surrounding the 13-acre field includes a small pond and wetland, fragmented secondary woodland, and commercial development (a college campus, parking lots, district court, hospital, golf course, and a highway). Construction of the project will not fragment woodland, and will not impact shrubland, wetland, or other native habitat.

The Nesting Bird Census identified approximately 22 species nesting within the grassy field, forested edge, and wetlands adjacent to the field. The species observed were mostly songbirds of upland fields and forest edges. Raptors and shorebirds such as the American Woodcock or Wilson's Snipe do not nest in the turbine area. Of interest were Bobolink and Willow Flycatcher. No federal or state-listed avian species were observed, nor were they expected according to correspondence from the NHESP and USF&WS.

Nocturnal songbird migration above the project site will be part of a broad-front migration over central Massachusetts. Additionally, the site is located away from the Atlantic coast and other ecological barriers and magnets. A search of studies at many other similar sites in the Eastern U.S. indicates that migration traffic will be low to moderate at the site and most birds will fly well above the rotor-swept area.

Based on the results of the risk assessment, fatality numbers and species impacted at the project site are likely to be similar, on a per turbine per year basis, to those found at Eastern and Midwestern U. S. projects that have been studied. Because there will be only one or two turbines, the absolute numbers of fatalities will in all likelihood be very small and when distributed among several species, are not likely to be biologically significant. When compared with most other wind power facilities, collision risk factors for raptors

are minimal. Collision risk to night-migrating songbirds is likely to be similar to other sites examined because the altitude of migration is generally above the sweep of the wind turbine rotors.

Summary of Bat Studies

A walking survey of the area revealed a low density of appropriately-sized snags that could contain roosting habitat for cavity- and bark-roosting bat species. The southeast corner of the project area did, however, contain some taller snags that would provide suitable roosting habitat. Consultation with state and federal agencies and a review of the literature did not identify the presence of protected species. There appeared to be very little exposed rock habitat that could be used as roost sites by the eastern small-footed *Myotis* (MA Species of Special Concern). Several small ponds and marshes surrounded the project site and could be used as foraging habitat by local bats.

Preconstruction acoustic monitoring was carried out for the summer and fall season of 2008. Acoustic monitoring will be carried out during the spring 2009 migratory season to document the complete migratory cycle of bats at the project site. Results of the monitoring will be included in the draft EA.

Based on the results of the risk assessment, fatality numbers at the project site are likely to be similar in both composition and magnitude (on a per turbine basis) to other wind projects sites in the eastern United States. Given the small size of the project (1 or 2 turbines), total impact of the project is unlikely to significantly impact local bat populations. There were no data to suggest that protected bat species will be impacted by development of the MWCC project site.

Mitigation

Several mitigation measures will be evaluated in the EA. A grassland management plan will be developed for the project site and other areas of the college to improve avian habitat. The field will not be mowed until after August 1 to protect nesting birds. Brushy areas will not be mowed to provide additional habitat for the Willow Flycatcher. The southeast corner of the project area will not be disturbed to minimize impacts to potential bat roosting habitat.

Post construction studies are proposed as outlined in the Mitigation Overview. Design elements such as underground cable and monopole towers have been incorporated into the project to minimize impacts to avian and bat species.

Public Scoping

The general public and all interested state, local, and federal agencies are invited to participate in the environmental documentation process. Agencies should identify the issues, within their statutory responsibilities, that should be considered in the EA. The general public is also invited to submit comments on the scope of the EA. Please send your comments regarding the scope and content of the EA to:

Jacobs Engineering
343 Congress Street, 2nd FL
Boston, MA 02210
Attn: Maryann Magner
maryann.magner@jacobs.com

DOE will make the Draft EA available for public review and comment when complete. This scoping letter, the Phase 1 Avian Risk Assessment, the Phase 1 Bat Risk Assessment, the Mitigation Overview, the Draft EA (when available), and other relevant documents will be posted on the DOE Golden Field Office electronic reading room at www.eere.energy.gov/golden/reading_room.aspx, under the NEPA Documents section for the course of this project.

Please provide your input regarding the proposed project **on or before January 29, 2009**. Thank you for your participation in the environmental review process.

Sincerely,

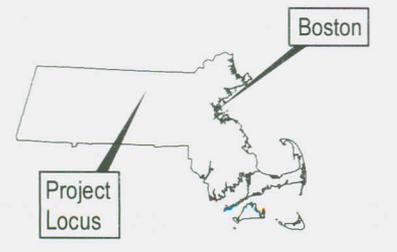
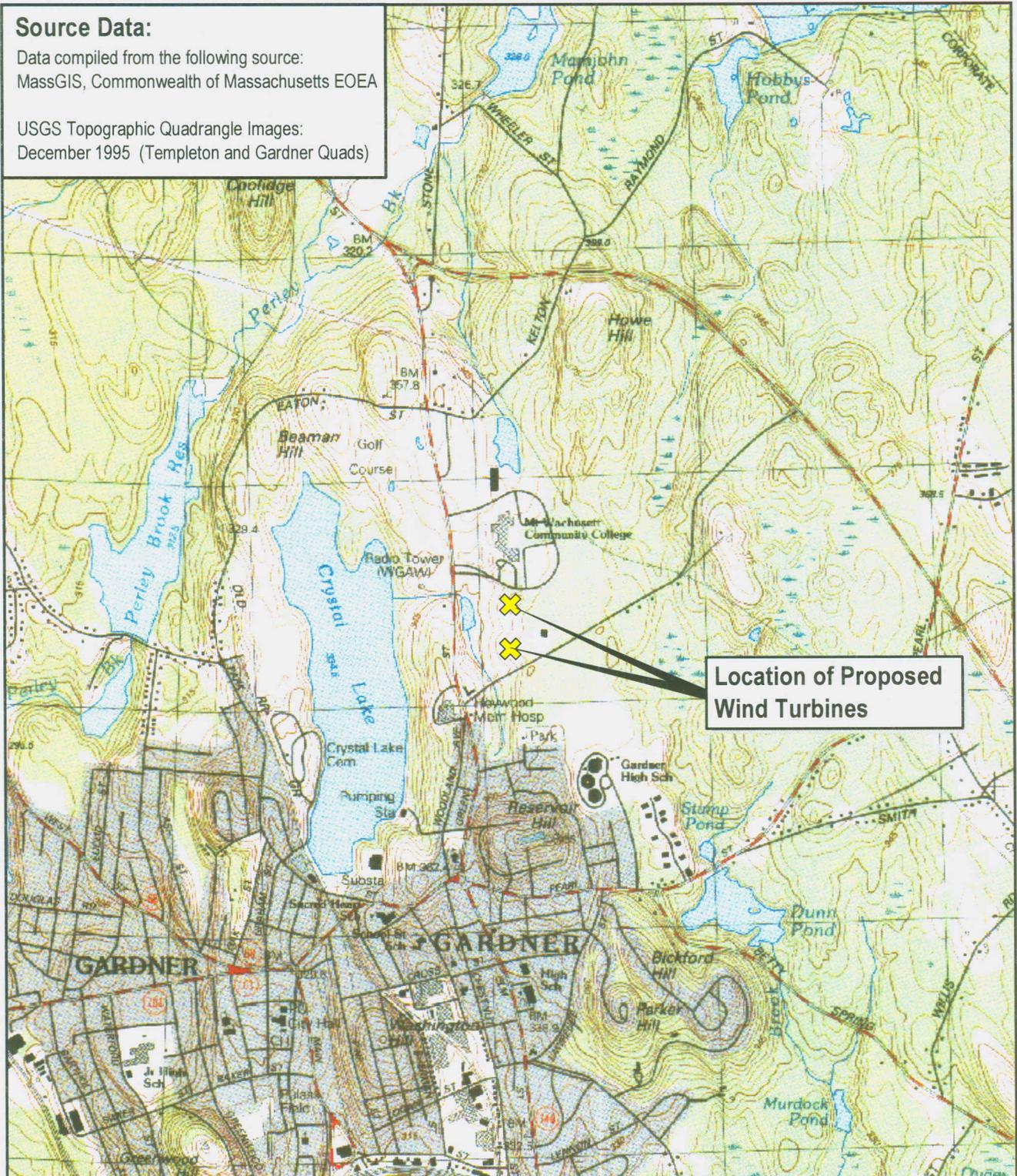


Steven P. Blazek
NEPA Compliance Officer
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

Source Data:

Data compiled from the following source:
MassGIS, Commonwealth of Massachusetts EOE

USGS Topographic Quadrangle Images:
December 1995 (Templeton and Gardner Quads)



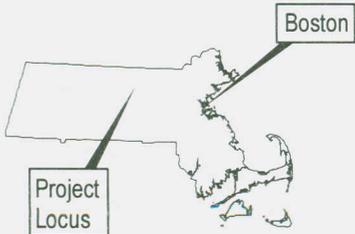
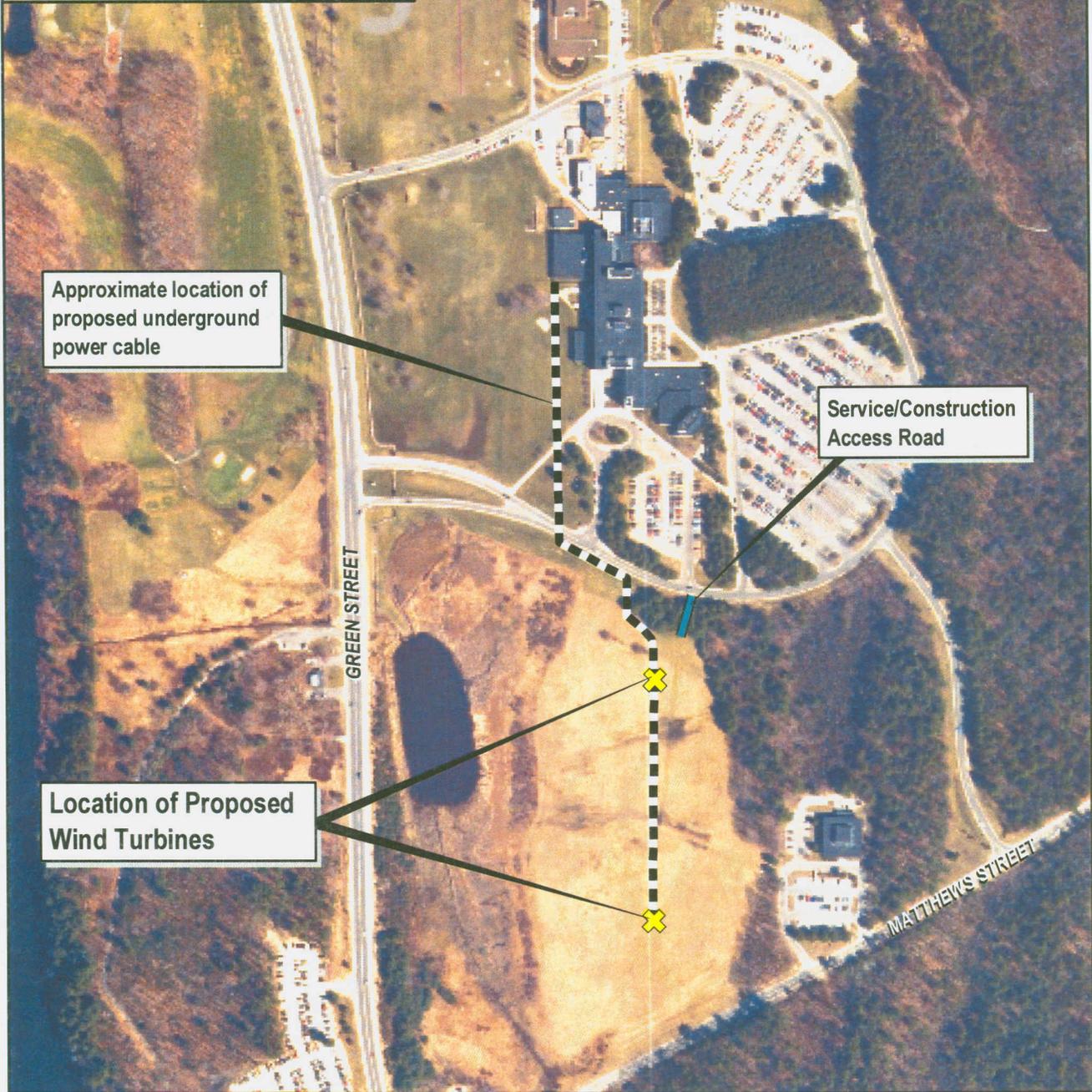
Locus Map
Mount Wachusett Community College
Wind Turbine Project
Gardner, MA

Figure 1

Source Data:

Data compiled from the following source:
MassGIS, Commonwealth of Massachusetts EOE

1:5,000 Color Ortho Imagery: April 2005



Approx. Scale: 1"=400'

Project Site Map

**Mount Wachusett Community College
Wind Turbine Project
Gardner, MA**

Figure 2