Commonwealth of Massachusetts
Executive Office of Environmental Affairs ■ MEPA Office

ENF Environmental Notification Form

For Office Use Only *Executive Office of Environmental Affairs*
EOEA No.: 13525
MEPA Analyst: Aisling Eglington
Phone: 617-626- 1024

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Massachusetts Technology Collaborative, Renewable Energy Trust Cape Cod Community College Wind Energy Project		
Street: 2240 Iyanough Road		
Municipality: West Barnstable 02668	Watershed: None	
Universal Transverse Mercator Coordinates: UTM Zone 19, NAD27 CONUS, Northing 4616215, Easting 0388978	Latitude: 41.69189° N Longitude: 70.33409° W	
Estimated commencement date: August 2005	Estimated completion date: April 2006	
Approximate cost: $2,550,000	Status of project design: %25% complete	
Proponent: Massachusetts Technology Collaborative, Renewable Energy Trust		
Street: 75 North Drive		
Municipality: Westborough	State: MA	Zip Code: 01581
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Paul D. Cleri		
Firm/Agency: R. W. Beck, Inc.	Street: 550 Cochituate Road, 4-East	
Municipality: Framingham	State: MA	Zip Code: 01701-9344
Phone: 508-935-1846	Fax: 508-935-1888	E-mail: mtc-cccc.wind@rwbeck.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

Has this project been filed with MEPA before?
☐Yes (EOEA No._____) ☒No

Has any project on this site been filed with MEPA before?
☐Yes (EOEA No._____) ☒No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:

a Single EIR? (see 301 CMR 11.06(8))	☐Yes	☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes	☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes	☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes	☒No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres): Capital funding for project by the Massachusetts Technology Collaborative (MTC); land lease or transfer of less than 2 acres involving up to three state agencies: MTC, Cape Cod Community College, and the Massachusetts Highway Department.

Are you requesting coordinated review with any other federal, state, regional, or local agency?
☐Yes(Specify_____) ☒No

List Local or Federal Permits and Approvals: (a.) Federal Aviation Administration Aeronautical Clearance; (b.) Massachusetts DEP General Stormwater Permit(s)/NOI; (c.) no other identified permits.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- ☐ ~~Land~~
- ☐ ~~Water~~
- ☐ ~~Energy~~
- ☐ ~~ACEC~~
- ☐ ~~Rare Species~~
- ☐ ~~Wastewater~~
- ☐ ~~Air~~
- ☐ ~~Regulations~~
- ☐ ~~Wetlands, Waterways, & Tidelands~~
- ☐ ~~Transportation~~
- ☐ ~~Solid & Hazardous Waste~~
- ☐ ~~Historical & Archaeological Resources~~

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	~123 acres		
New acres of land altered		< 2 acres	
Acres of impervious area	~28 acres	negligible	~28 acres
Square feet of new bordering vegetated wetlands alteration		not applicable	
Square feet of new other wetland alteration		not applicable	
Acres of new non-water dependent use of tidelands or waterways		not applicable	
STRUCTURES			
Gross square footage	~330,000	100 sq. ft.	~330,100
Number of housing units	12	none	12
Maximum height (in feet)	~60 feet	400 feet	400 feet
TRANSPORTATION			
Vehicle trips per day	2000 – 3000	0	2000 – 3000
Parking spaces	1300	0	1300
WATER/WASTEWATER			
Gallons/day (GPD) of water use	4000 - 10,000	0	4000 - 10,000
GPD water withdrawal	4000 - 10,000	0	4000 - 10,000
GPD wastewater generation/ treatment	4000 - 10,000	0	4000 - 10,000
Length of water/sewer mains (in miles)	1 – 2 miles septic, no sewer	0	1 – 2 miles septic, no sewer

State Permits & Approvals

- ☐ Order of Conditions
- ☐ Superseding Order of Conditions
- ☐ Chapter 91 License
- ☐ 401 Water Quality Certification
- ☐ MHD or MDC Access Permit
- ☐ Water Management Act Permit
- ☐ New Source Approval
- ☐ DEP or MWRA Sewer Connection/ Extension Permit
- ☒ Other Permits (*including Legislative Approvals*) – Specify:

NPDES Stormwater/NOI

No other state permits identified at this time.

CONSERVATION LAND: Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐Yes (Specify_____) ☒No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐Yes (Specify_____) ☒No

RARE SPECIES: Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☐Yes (Specify_____) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES: Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☐Yes (Specify_____) ☒No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐Yes (Specify_____) ☒No

AREAS OF CRITICAL ENVIRONMENTAL CONCERN: Is the project in or adjacent to an Area of Critical Environmental Concern?

☐Yes (Specify_____) ☒No

PROJECT DESCRIPTION: The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative

Project Background

MTC and the Cape Cod Community College proposing to install a 1.5 MW wind turbine on the CCCC campus in order to demonstrate, educate, and promote the use of renewable wind energy. As discussed below, the CCCC Wind Turbine will be integrated into the educational curriculum of the Cape Cod Community College. It will also serve to increase public awareness of the viability of renewable energy, and will provide economic benefits to low income residents in Massachusetts through the MTC's Low Income Initiative, and to CCCC in the form of lower electricity prices. MTC will be responsible for overall management of the development process.

Educational Benefits and Use

The wind turbine, which is scheduled to be installed at Cape Cod Community College's (CCCC) campus in early 2006, will provide an excellent teaching instrument for CCCC's environmental program as well as other courses at the college. The wind turbine will enable the CCCC to further its goal of becoming an energy sustainable campus. The presence of the wind turbine will be a visual reminder for other departments at the college to relate sustainable issues to their subject areas. Furthermore, the turbine will be in a location that is easily seen and may be visited by tourists who come to Cape Cod every year, and it will give residents of this area their first real experience with a modern, commercial-scale wind turbine.

The environmental students at the college will use the installation of the wind turbine as a case study. They will be able to learn about the process of siting, permitting, and installing a commercial-size turbine. Students will be able to participate in the avian research that is being conducted and will thoroughly document the installation process as it occurs. Through the environmental science energy lab, students will analyze a wide variety of data that will be collected from the turbine and will calculate, for instance, the economic payback and emission reductions. Students at CCCC will be instrumental in developing a public information kiosk that will be located at the site to introduce the public visitors to the wind turbine. This project will include the science department as well as the graphic arts department.

CCCC is developing a renewable energy certificate program with a three-year grant from the National Science Foundation. The Renewable Energy Sources instructor will be able to demonstrate a working turbine for the ongoing classes, and, as we develop the certificate program, the wind turbine will be an integral part of any wind energy courses that are created. As the wind industry develops in the northeast, the presence of a wind turbine at the college could make CCCC an ideal place to train students for careers in this rapidly growing wind energy industry, and the potential exists for developing a variety of courses related to this career path.

In addition to the education of CCCC students, students on campus tours, faculty, staff, and other visitors to the college will be introduced to the concept of wind energy. Area tech schools and traditional high school students will be able to visit the site and will have access to the data as well for their respective courses. Through a partnership with CCCC, the Cape's two technical high schools are introducing students to renewable energy technologies. The wind turbine will used by these students and will encourage them to continue their education at the college.

In short, the wind turbine, both in development and in operation, will provide an invaluable teaching and learning tool for students in CCCC's Environmental Technology courses. It will also encourage treatment of sustainability issues in other parts of CCCC's curriculum, and will become a way for the general public to learn about renewable energy as well. The project will provide a means by which CCCC can meet its goal to extend its leadership in sustainability and environmental education.

MTC Low Income Initiative

The CCCC Wind Turbine will be developed by MTC under its Low Income Initiative, which is designed to return some of the benefits of renewable energy development to low income electric customers in Massachusetts. As part of its Low Income Initiative ("LII"), MTC plans to develop three wind turbines in Massachusetts. The electrical output from these turbines will be sold into the wholesale market, used at the host site, or both. Revenues from the sale of energy and Renewable Energy Certificates ("RECs") will be donated to the Massachusetts Low Income Energy Assistance Program ("LIEAP"), for projects that improve energy efficiency and reduce energy costs in the homes of the state's low income residents. The turbines developed under the LII also will serve as demonstrations of small-scale wind turbine technology. The CCCC Wind Turbine is expected to be the first turbine developed by MTC under the LII program. Electrical output from the CCCC Wind Turbine will be used primarily on the CCCC campus; any excess will be sold into the wholesale power market. Project revenues, after payment for operations and maintenance services, will be donated to the MA LIEAP.

Project Site

The CCCC main campus is located in West Barnstable, north of Exit 6 of the Mid-Cape Highway at the junction of U.S. Route 6 and Massachusetts Route 132. The campus occupies approximately 129 acres. There are a total of twelve buildings on campus, which comprise approximately 330,000 square feet. Approximately 25 acres on campus are impervious, with buildings or pavement for parking and transportation; the balance of the campus is landscaped greenery, athletics fields, or forested. The proposed location of the wind turbine, which is approximately 400 feet east of the Parking Lot 5, is principally forested with a mixture of dense hardwoods and conifers; the area is already partially developed by CCCC as a student recreation area, with walking paths and an extensive Frisbee-golf course. To construct the wind turbine unit, a circular area approximately 260 feet in diameter, covering approximately 1.22 acres, will need to be cleared and leveled. An access road approximately 400 feet long and 16 feet wide will be required between the parking lot and the turbine site; it will be located at or near the northeast corner of Parking Lot 5.

On-Site and Off-Site Alternatives and Impacts

The principal impacts of the CCCC Wind Turbine project include potential views of the turbine from locations on and off the CCCC campus and potential noise impacts. Nearby receptors include a number of residential homes, a YMCA complex, a private golf course, a small church, a highway rest area including a gas station and several fast-food establishments, and a nearby tourist/chamber of commerce information center. Impacts may be greatest at some of the nearest residential receptors to the northwest of the campus property; however, these receptors would be on the opposite side of the campus from the wind turbine. The nearest property line to the wind turbine site is the Mid-Cape Highway and several un-developed parcels of land primarily owned by the Town of Barnstable and the Commonwealth.

The neighborhood topography is generally hilly and densely forested, providing good cover and visual impact mitigation for the proposed wind turbine at least during the seasons when one would expect leaf density to be greatest, although much of forestation appears to be coniferous suggesting good leaf density throughout the year. Photographic simulations of the wind turbines as seen from several viewpoints under summer and winter conditions are attached as Appendixes F and G. The hilly, densely forested area is expected to mitigate potential noise impacts. During off-peak, mid-day hours, noise from the Mid-Cape highway is noticeable and pervasive on the CCCC Campus, particularly near the proposed location for the wind turbine. It seems likely that the greatest noise component in this area after installation of a wind turbine would continue to be the highway.

A Phase I Avian and Bat Risk Assessment was conducted for the project in early 2005. The study offered a number of recommendations to reduce potential risk to birds and bats, and concluded that the project is likely to be of low risk to birds and resident bats, with potential impacts to migrating bats largely unknown. The study is attached at Appendix H. Although the Phase I assessment indicated low risk, MTC currently is conducting spring songbird migration studies at the wind turbine site, and anticipates conducting a similar study for fall songbird migration in order to gain information about migration behavior and interaction with wind turbines in New England.

During the course of project development, MTC and CCCC examined three possible turbine locations on the east side of the CCCC campus, and selected the proposed site because it provided slightly greater separation between the turbine and the main campus area. Off-site alternatives locations were not considered because the educational benefits of the project are enhanced by its location on the CCCC campus, and because the sale of energy to CCCC for use on its campus increases the economic benefits available to low income electric customers under MTC's LII, and to CCCC as a result of lower electricity prices. In addition, the impacts of the proposed project would likely be greater if it were located on off-site lands, because the CCCC campus provides an extensive buffer between the turbine and potential receptors which would not be available in other locations.

On-Site and Off-Site Mitigation Measures

MTC and CCCC have developed a comprehensive schedule of stakeholders, which they will use during the development phase of the project to identify concerns that need to be addressed during project implementation. As discussed above, mitigation is provided primarily by the extensive buffer zone provided by the college campus surrounding the turbine site, the generally hilly topography in West Barnstable, and the heavily forested campus surroundings.