

Wind Energy System Zoning

PURPOSE

To promote the production of clean, renewable power with wind energy systems while ensuring that they are properly sited, installed and maintained.

HOW IT WORKS

Wind is a renewable energy resource which lowers fossil fuel use and associated pollution, and increases energy independence. Wind energy systems use the kinetic energy in the natural motion of the wind and convert it into electricity. This is usually accomplished by fan-like structures that spin an electric generator as they are swept by the wind.

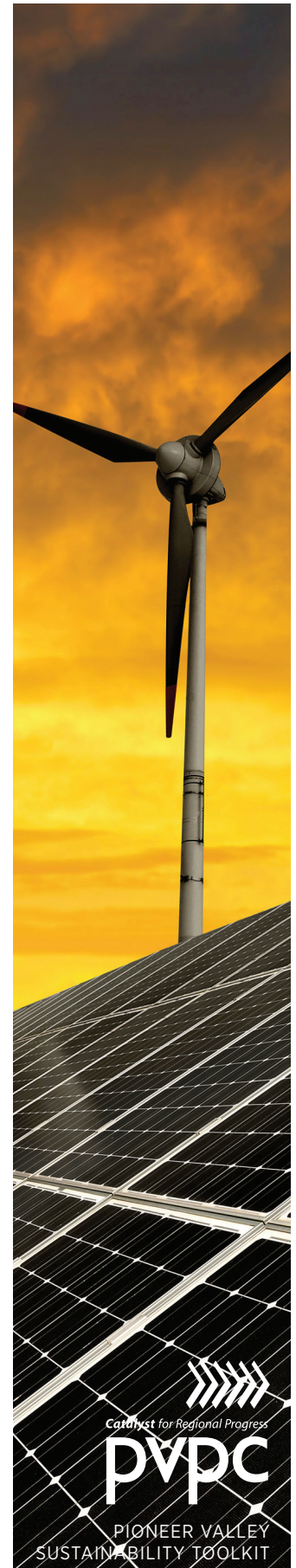
The scale of a wind energy installation can vary, from small-scale residential wind turbines as the height of a utility pole to large-scale commercial turbines a few hundred feet tall. Cities and towns can adopt bylaws and ordinances that address environmental, design and safety standards to ensure that any wind energy system is properly installed and sited to avoid potentially negative impacts on neighbors and the environment.

Zoning bylaws that regulate wind energy systems generally specify requirements for: lot size, type of tower, supporting foundations, tower height, setbacks, visual impact, color, lighting, signage, noise and measurement of any shadow or flickering effects, utility connections, emergency services, maintenance and decommissioning of the systems once it has reached the end of its useful life.

EXAMPLES OF WHERE STRATEGY HAS BEEN ADOPTED

Over 30 Massachusetts' towns have adopted wind energy bylaws, including Chester, Dennis, Middlefield, Nantucket, Plymouth, Revere, Spencer, Wenham and Worcester.

The Massachusetts Green Communities Office, under the Department of Energy Resources, has developed a model bylaw for large-scale wind energy systems. This model has been used by Kingston, Milton, Revere and Wenham to allow by-right installation of wind towers as long as they meet the requirements outlined in the bylaw and that projects comply with site plan review.



The Town of Plymouth allows wind turbines of up to 350 feet in height to be located in their jurisdiction as long as they meet all the requirements for a special permit, such as those related to setbacks, noise, utility connections and others described above. Similar in requirements, the town of Chester in the Pioneer Valley region allows for large-scale wind turbines up to 420 feet.

Also in the Pioneer Valley, the Town of Middlefield allows only small-scale wind energy systems in their jurisdiction by special permit, which is defined as any system under 130 feet in height and with a capacity equal to or less than 60 kilowatts (kW).

LINKS TO MODEL BYLAWS OR MORE INFORMATION:

THE MASSACHUSETTS DEPARTMENT OF ENERGY RESOURCES HAS DEVELOPED A MODEL BYLAW WIND ENERGY INSTALLATIONS. THIS MODEL CAN BE FOUND AT:
<http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/wind/wind-energy-model-zoning-by-law.html>

TOWN OF CHESTER WIND BYLAW:
<http://townofchester.net/sitebuildercontent/sitebuilderfiles/windenergyconversionfacilitiesbylawfinal.doc>

TOWN OF DENNIS ZONING BYLAWS – SECTION 11:
http://www.town.dennis.ma.us/Pages/DennisMA_Building/bylaw.pdf

TOWN OF LUDLOW SMALL WIND ENERGY BYLAW – SECTION 6.19:
<http://www.ludlow.ma.us/reports/planning/bylaws/zoning-bylaw-text.pdf>

CAPE AND ISLANDS SELF-RELIANCE
<http://www.reliance.org/wind.asp>

MASSACHUSETTS GREEN COMMUNITIES THAT HAVE ADOPTED BY-RIGHT RENEWABLE ENERGY BYLAWS:
<http://www.mass.gov/eea/docs/doer/green-communities/grant-program/adopted-as-of-right-siting-through-re-generation.pdf>

CAPE COD COMMISSION MODEL BYLAW FOR WIND ENERGY CONVERSION FACILITIES:
<http://www.capecodcommission.org/resources/bylaws/ModelWindBylaw.pdf>

FOR MORE INFORMATION, PLEASE CONTACT

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