

APPROVED

MINUTES OF WIND ADVISORY COMMITTEE MEETING

Duxbury, MA

March 12, 2013

The following are the minutes of the meeting of the members of the Board of The Wind Advisory Committee of Duxbury, held in Duxbury, MA on the above date at 7:30pm EST. [Present: Daniel Ryan, Tom Burton, Andreas K. Klein, Susan Fontaine, Jim Savicki, Mr. Jensen (guest), female guest. Absent: Jack Murphy (member)].

- I. Minutes from prior meeting -> not distributed, so not reviewed or approved.
- II. Mr. Andy Bryges, Senior Director of Renewable Energy Generation at the Massachusetts Clean Energy Center gave a presentation on Mass wind energy siting and development, a copy of the presentation is attached. Members of the Committee and other attendees asked questions throughout the presentation.

Highlights included 100 MW of wind energy from 78 turbines are currently in use in Massachusetts. Approximately 10-20 MW will be installed this year and 50MW were installed last year.

Mr. Brydges discussed several areas of community concern ranging from Noise Curves and MA noise standards (MA standard is only 10 decibel above ambient level, which has been the same general Dept. of Environmental Protection (DEP) guideline for 40 years) to Nameplate Capacity and power curves affecting the economics of wind turbines. He also noted that there is no DEP or other gov't standard for infrasound at this time and that noise standards vary by state, with some setting specific noise standards for wind turbines.

He then discussed other Siting and Development concerns and the importance of addressing public concerns early by engaging the public early in the process even before feasibility studies at the bylaw stage.

He reviewed general guidelines for turbine height to be economical as well as Dept. of Energy Resources current recommendations of minimum distance residences should be from Turbines (3.5x Blade Tip Height).

All turbines require acoustic studies and its recommended that MET Towers collect data for up to a year to determine whether wind speeds are sufficient to support wind energy (though new technology may reduce that time frame).

Mr. Brydges addressed shadow flicker issues and noted that it can be eliminated through selective shutdowns. Since flicker can be completely eliminated, his opinion was that residents need not live with flicker if desired.

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CEC has commissioned noise studies to better understand the impacts of turbine noise (including infrasound) as well as property value studies and part of Mr. Brydges recommendations were to wait and see the results of these various studies. The property value study should be available Mid-June. Acoustic studies on the Kingston Turbines should be available in mid-April. Broader acoustic studies would be available in the fall.

Mr. Brydges noted that from an economics perspective, net metering rules in Massachusetts have had a dramatic effect on the economics of wind energy.

The discussion then turned to various wind technologies, including those that improve the efficiency of wind energy and vertical axis turbines (though it appears no new technology is at the mass adoption stage).

The discussion then turned to the Duxbury wind bylaw and height restrictions that generate the best economics balanced against safe distances from residences and noise and flicker concerns. No conclusions were drawn from the discussion.

The committee then discussed visiting a turbine as a possible next step, perhaps in May.

The meeting was adjourned at 9:30pm EST.