

June 16, 2011

## **Expert Panel on Potential Health Impacts Associated with Exposure to Wind Turbines**

### **Introduction**

There are a variety of existing and proposed wind turbines in the Commonwealth of Massachusetts. Some members of the public have raised concerns that there may be health impacts potentially related to noise, infrasound, vibration and/or light flicker generated by the turbines. The purpose of convening this Panel is to identify any documented or potential human health impacts or risks that may be associated with exposure to wind turbines, and to facilitate discussion of wind turbines and public health based on sound science. The Panel will focus on human health issues and will not address other related issues such as aesthetics, cultural or property values, or ecological impacts.

### **Panel Charge**

1. Identify and characterize attributes of concern (e.g., noise, infrasound, vibration, and light flicker) and identify any scientifically documented or potential connection between health impacts associated with wind energy turbines located on land or coastal tidelands that can impact land-based human receptors.
2. Evaluate and discuss information from peer reviewed scientific studies, other reports, popular media, and public comments received by the Department of Environmental Protection (MassDEP) and/or in response to the Environmental Monitor Notice and/or by the Massachusetts Department of Public Health (MDPH) on the nature and type of health complaints commonly reported by individuals who reside near existing wind farms.
3. Assess the magnitude and frequency of any potential impacts and risks to human health associated with the design and operation of wind energy turbines based on existing data.
4. For the attributes of concern, identify documented best practices that could reduce potential human health impacts. Include examples of such best practices (design, operation, maintenance, and management from published articles). The best practices could be used to inform public policy decisions by state, local or regional governments concerning the siting of turbines.
5. Issue a report within 3 months of the Panel's evaluation, summarizing its findings.

In conducting its evaluation the panel will:

1. Conduct a literature search and suggest studies and reference materials.
2. Evaluate and discuss information from peer reviewed scientific studies, other reports, and popular media on the nature and type of health complaints commonly reported by individuals who reside near existing wind farms.
3. Indicate the quality of the data and the weight-of-evidence for potential health effects associated with wind turbines.
4. Clarify best management practices versus precautionary measures.
5. Conduct at the Panel's discretion fact-finding activities, including field trips to one or more wind turbine locations.

## **Deliverables**

Panelists will:

1. Prepare an outline of the report.
2. Review information received by MassDEP and/or in response to a request for comments published in the Environment Monitor and/or by MDPH.
3. Meet with MassDEP and MDPH as necessary to seek advice on any issues or questions they may have about the project or aspects of it.
4. Prepare a draft report, including an executive summary and a comprehensive bibliography, for MassDEP and MDPH review and comments (for clarity and completeness).
5. Address any agency comments and provide a draft final report.

**Proposed Expertise of Panel Participants: While it is anticipated that some panel members will have had experience in matters related to wind turbines, the panel members shall not be employed directly or indirectly by the wind industry.**

1. Public health representative with experience in addressing wind turbine health concerns
2. Sleep Disturbance specialist
3. Acoustical noise expert
4. Mechanical/civil engineer with expertise in various types of wind turbines
5. Neurophysiologist (specialist on effects of strobing)
6. Official with experience on local board of health review of project proposals
7. Clinician (with pediatric experience) to address general public health issues
8. Mental Health Expert to consider potential psychological/social impact

The panel will be provided with assistance from the University of Massachusetts Donahue Institute (administrative assistance, report editing) and a Project Manager for overall project oversight and delivery.