



February 25, 2013

Re: New Peer-Reviewed Studies and Research on Wind Turbine Health Impacts

Ken Kimmell, Commissioner
Department of Environmental Protection
One Winter Street
Boston MA 02108

Lauren Smith, MD Interim Commissioner
Department of Public Health
250 Washington Street
Boston MA 02108

Dear Commissioners:

We are writing to inform you of important new peer-reviewed research studies involving the health impacts of industrial wind turbines that have appeared since you held public hearings and a comment period for your Wind Turbine Health Impact Study. We believe these studies contradict some of the Study's findings and, we believe, it would be advisable to examine them before releasing a final report.

The new research is particularly important in light of the fact that the panel only reviewed selected literature on the health impacts of the wind turbines and stated that there was a dearth of peer-reviewed literature on the subject. We believe that these new studies will significantly change your final recommendations.

New Research Findings

The peer-reviewed studies have added to the growing evidence that individuals living near industrial wind turbines face significant health risks. The three studies:

Nissenbaum, M., Aramini, J., and Hanning, C. "Effects of industrial wind turbine noise on sleep and health." *Noise & Health* 14 (60) 237-243. 2012. The authors conclude that "noise emissions of IWTs [industrial wind turbines] disturbed the sleep and caused daytime sleepiness and impaired mental health in residents living within 1.4 km of the two IWT installations studied."

Ambrose, S., Rand, R., and Krogh, C. "Wind turbine acoustic investigation: infrasound and low frequency noise – A case study." *Bulletin of Science, Technology & Society* 32(2) 128-141. 2012. Ambrose, et al. found infrasound and low frequency noise (ILFN) or "dynamically modulated low-frequency and infrasonic energy" was produced by a 1.65 MW industrial wind turbine. Also "there was a strong correlation with wind speed, power output and health symptoms." "This acoustic study suggests that health effects reported by residents living near wind turbines may not be exclusively related to audible sounds." But "inaudible amplitude modulated acoustic energy can be detected by the inner ear and can affect humans more at low ambient sound levels, consistent with complaints of worse conditions indoors than out near IWTs."

Alec N. Salt and Jeffrey T. Lichtenhan. “Perception-based protection from low-frequency sounds may not be enough.” *Internoise 2012*. August 19-22, 2012. The Salt and Lichtenhan paper concludes that “there are potential mechanisms by which low-frequency sounds could influence vestibular physiology which are being ignored by some.” Salt and Lichtenhan report that their “measurements showing that the ear generates large electrical responses to low-frequency stimulation suggest that the effects of low-frequency sound on people living near wind turbines should not be dismissed by those with little understanding of how low frequency sounds indeed affect the ear.”

Review new studies before issuing final report

The Nissenbaum (et al.) and Ambrose (et al.) studies were reviewed when they were in a preliminary or draft form and were inappropriately dismissed by the “expert panel.” The fact that they have since been peer-reviewed and published indicates that they should not be dismissed in making your decision.

Avoid civil litigation and criminal penalties

Our governmental bodies and even the wind energy industry should be protective of human health. Failure to assess the effects of wind turbines on neighboring properties is the premise of a lawsuit brought by 60+ plaintiffs against Iberdrola, two consulting firms and a professional engineer at the Hardscrabble wind project in New York. The largest wind project in Massachusetts, Iberdrola’s Hoosac project was built this year. Will it result in similar litigation?

A recent lawsuit has received international attention in the scientific community. Members of an Italian earthquake risk commission – four scientists, two engineers, and a government official – have been sentenced to prison terms.

“Prosecutors didn’t charge commission members with failing to predict the earthquake (in L’Aquila Italy) but with *conducting a hasty, superficial risk assessment and presenting incomplete, falsely reassuring findings to the public.*”[our emphasis added] (*Science*, Vol. 338, pp. 184-188, 451, 452).

A review of wind energy feasibility studies prepared in numerous communities around Massachusetts where wind turbines have been sited finds many major discrepancies between predicted (modeled) and actual noise and flicker effects.

To conclude, Massachusetts government officials and the “experts” responsible for the MA Study have given the public a false sense of assurance that there are no health impacts from wind turbines. The studies certainly differ from that impression.

In addition, it is critical that the written submissions and personal testimonies of the life-altering experiences of those most affected by the wind turbines – the people living and working near the wind turbines – be incorporated into the final report in order to provide a more comprehensive picture of the impact of the turbines on the lives of individuals.

In order to protect the health, safety and well being of the citizens in Massachusetts, it is critical that when a final report is issued it incorporates the conclusions of the three peer-reviewed reports cited above, as reviewed by selecting experts in the authors' fields of study. We believe it is also critically important that the report acknowledge a full scope of the testimony by people who live with and work in the proximity of wind turbines.

Please communicate with us within 10 business days regarding the timeline for the release of a draft report by MassDEP and MDPH.

Thank you for your consideration.

Sincerely,

Wind Wise ~ Massachusetts,
Executive Committee members
Malcolm Donald, Falmouth
Louise Grabowski, Quincy
Lilli Green, Wellfleet
Virginia Irvine, Brimfield
Joanne Levesque, Duxbury
Michael Parry, Shelburne
Eleanor Tillinghast, Mount Washington

cc. Governor Deval Patrick
Speaker of the House Robert DeLeo
President of the Senate Therese Murray
Associate Commissioner MDPH Suzanne Condon
Senate Chair of the Joint TUE Committee, Benjamin Downing
House Chair of the Joint TUE Committee, John D. Keenan
Senate Chair of the Joint Committee on Public Health, John F. Keenan
House Chair of the Joint Committee on Public Health, Jeffrey Sanchez
Attorney General Martha Coakley
Boston Globe Health & Science Editor Gideon Gil
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