

Study: Falmouth turbines hurt abutters' health

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FALMOUTH — A study released last week concludes wind turbines in Falmouth negatively affect abutters' health.

The analysis was partially funded by a grant from Bruce McPherson, who opposes the Falmouth wind project and other turbine projects on Cape Cod. Its results assert that wind turbines cause "visceral" physical reactions and that sound waves from turbines are felt more intensely indoors than outside.

"We did not expect it," said Stephen E. Ambrose, a Maine environmental sound consultant who co-authored The Bruce McPherson Infrasound and Low Frequency Noise Study.

Ambrose declined to release the amount he was paid but said he and a partner each spent about 800 hours on the study.

Ambrose and Robert W. Rand, who also specializes in sound studies, conducted their research over three days in April, Ambrose said.

The two former employees of Stone & Webster Inc., a Stoughton engineering firm that designs and builds power plants, have conducted peer reviews on acoustics from turbines for several towns in Massachusetts, Maine and Wyoming.

For this study, Ambrose and Rand lived in a house near Blacksmith Shop Road for three days while measuring pressure originating from infrasound. They documented the intensity of sound frequencies from a privately owned turbine in the Falmouth Technology Park and how their bodies responded to it. The turbine studied is roughly the size of Falmouth's two municipal turbines.

When the two arrived at the house — located 1,700 feet from the turbine — on April 17, they began feeling effects within 20 minutes, according to the study. Both felt nausea, dizziness and anxiety, among other side effects.

They also reported having difficulty performing "normal activities" associated with the investigation, which included setting up instruments and observing measurements, the report states.

According to a chart included in the study, the discomfort and sick feelings intensified as wind speeds increased and the blades spun faster.

Previous sound studies that showed no negative health effects were done outdoors, Ambrose said. The recent study, which used low-frequency microphones to measure sound waves, showed sounds are more intense indoors than out. Data from this study showed a 10 dbG (a measurement for infrasound) increase outdoors and a 20 dbG increase indoors. The effect is similar to "living in a drum," he said.

An independent review of the acoustics data indicates it is scientifically valid, Nancy S. Timmerman, chairwoman of the Acoustical Society of America's Technical Committee on Noise, said in an email. She added that she can speak only to data on acoustics, not physiological effects reported in the study.

Jim Cummings, executive director of Acoustic Ecology Institute, another expert who looked at the study, said in an email the results could be a red flag on the correlation between infrasound and negative health effects, but more data are needed to establish proof.

"This is an indication, for sure, but a short sampling to base large claims on," Cummings wrote. "This and one other recent paper from the Association for Noise Control Engineers conference, Noise-Con, are both good indications that infrasound could be more problematic than generally assumed."

Falmouth Selectman Mary Pat Flynn, chairman of the board, said the study is one of many the board has received about wind turbines. Others show little or no harm caused by turbines, she said.

"We've had a number of studies sent to us, and they all have different points of view, and they all have different outcomes," Flynn said.

Ambrose and Rand's study comes as the state Department of Environmental Protection prepares itself for a sound study of the Falmouth-owned Wind 1 turbine. Environmental regulators agreed in September to conduct the study after Falmouth selectmen reached out to the department in September.

"It's still in the works, still under review," said Ed Coletta, a DEP spokesman. "We're hoping to get it done soon."

Last month selectmen announced the town would shut down the 1.64-megawatt Wind 1 — except during the tests — until April's town meeting. The town also plans to start up the Wind 2 turbine for 60 days, during which time officials plan to log complaints from residents.

The announcement came as a compromise after Wind 1 abutters filed a nonbinding town meeting article that asked selectmen to keep both turbines off until "mitigation options are fully explored and the existence of injurious conditions upon nearby residents can be qualified."

Wind 2, which has sat idle for about a year, could begin spinning for its trial period before mid-January, said Gerald Potamis, Falmouth's wastewater superintendent, who oversees the two municipal turbines.

Next month, Falmouth selectmen will choose a consultant to help advise the town on minimizing the impact of wind turbines on neighbors, Flynn said. Four firms were presented to selectmen during a meeting Dec. 19. The board will accept suggestions from residents until Jan. 4 and plans to choose one Jan. 9, Flynn said.

Comments

Sue Hobart

The Falmouth residents effected must attempt to DEMAND INDOOR testing from independent minded accousticians not industry prostitutes.

By the way Bruce McPherson was not opposed to the Falmouth Wind turbines..he was concerned enough about the health questions that came up after installation to put his money where his mouth was and seek real answers... something the State and town of Falmouth are not.

Mr McPherson has passed away ... thus can not benefit from the results of this study. It was wholly a philanthropic activity on his part. God Bless him. The true character of a man can be judged by how he treats those that can do nothing for him.

This study needs to be duplicated in the thousands of homes internationally that have been made toxic by these oversized turbines in residential areas. They are throwing too much pressure off for human habitation.

I speak to this personally... this study was in my home.