

Wind turbines generate noise complaints

By Steve Cartwright

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The Fox Islands wind project on Vinalhaven is up and running, but amid the cheering are a few complaints about the noise created by the massive turbines, their blades turning endlessly in the sky.

At least dozen residents who have homes near the turbines say they support wind power in concept, but claim they were not informed beforehand about the noise level of the turbines, which are owned and operated by the local electric cooperative.

“Whatever it (the noise) is, it’s enough to wake me up at night,” said Cheryl Lindgren, a year-round resident who lives about 2,000 feet from the turbines and can hear the blades turning in the wind.

Elliot Brown, president of the board for Fox Islands Electric Cooperative, said he hasn’t yet visited the site in person to listen to noise levels, but he has heard from people who object to the sound of the turbines as well as from neighbors who don’t seem bothered by it.

Lindgren’s husband Art Lindgren, said “the faster they go, the louder they are.” He said his goal is not to shut down the turbines, but to convince the co-op, which controls Fox Islands Wind LLC, to reduce the speed and thus the noise level. “The faster things go, the louder they are,” he said.

For most Vinalhaven and North Haven ratepayers, voting for wind power was easy: It depends on a free source of energy, it’s nonpolluting, and it’s expected to make electricity cheaper for all island ratepayers. Officials say the old cost of 10 cents per kilowatt-hour could be almost cut in half, resulting in a 10-15 percent lowering of an average bill, a savings that will continue. The turbines have generated over 1.8 million kilowatt hours so far, according to George Baker, CEO of Fox Islands Wind.

Baker said those objecting to noise from the turbines are a small number of the island’s residents. “It’s truly just a handful who were really upset,” he said. “The project has just enjoyed enormous community support.”

The \$15 million project was formally dedicated in mid November, although the turbines began generating electricity in early November. The turbines have been reported as trouble free so far, but some residents are bothered by the noise they make, both from the generator itself and the sound blades make turning in the wind.

Erin Creelman, a year-round wife and mother who is part of a neighbors’ group, said she is concerned that Fox Islands Wind follows the law. The so-called quiet zone around the turbines is supposed to have a maximum noise level of 45 decibels. At one point the noise was recorded at 46 decibels at neighbor Art Farnham’s home, and that triggered a mandatory “power-down” of the turbines, meaning they are not running at full capacity.

Farnham, closest neighbor to the turbines, has refused an easement for the wind turbines and also declined to sell his property to Fox Islands Wind.

Creelman voted for the wind turbines and acknowledged that how much their sound bothers anyone is subjective, but standards must be enforced, she said.

Ethan Hall has built his own house. It's now about 3,000 feet from the turbines, and he can hear them, he said. He believes turbine proponents misled him about the true noise level. He was told when the wind blew it would tend to mask the turbine noise.

Brown, the co-op board president, said, "We were all told it would make a whooshing noise." He said some nearby residents think the noise is terrible while others seem not to notice it. "Anything that generates anything at all, mechanically, there is going to be a little noise to it," he said.

"If it stays the way it is, it's really untenable," commented David Wylie, an executive with Babson College who with his wife, Sally, are seasonal residents. The couple has considered retiring to their Vinalhaven home but the noise of the turbines has given them pause.

David Wylie said he has heard the noise compared to a cement mixer, and to a jet plane that never lands. The couple said they were not told how loud the turbines would be, but they hastened to say they want to get along with fellow residents and they don't blame the local electric co-operative for any problems with noise.

Sally Wylie said she has measured a daytime noise level of 45 decibels, while an international standard is a maximum of 35 decibels. Maine allows the higher level, she said.

Andrew Fisk, director of the Bureau of Land and Water Quality at the Department of Environmental Protection, said he is "comfortable" with the current state standards and sees no reason to change the 45-decibel limit. "They (wind turbines) do make noise. We have to come up with a reasonable standard," he said. Fisk acknowledged there have been "a lot of conversations" about the sound produced by wind turbines both on Vinalhaven and at sites across the state.

"The level of noise is not difficult to measure. Its effect on people is difficult to measure," Fisk said, adding that Fox Islands Wind voluntarily sought state certification of its turbines. The project is small enough that state oversight was not required, he said.

The complaints from island homeowners haven't fallen on deaf ears. There have been several meetings between neighbors and officials at the Fox Island Electric Co-op and Fox Islands wind. Fox Islands Wind also mounted a pair of sound monitors near the towers, and a sound engineering firm, Acentech of Cambridge, Massachusetts, has been contracted to make a study.

George Baker, a Harvard economist who used an extended sabbatical to shepherd the wind power project to completion, said it will take months to collect meaningful data on the turbines' noise output, and that information will have to be analyzed. He talks about an "operational mitigation and containment regime" that could involve slowing the turbines when they create a certain level of noise. That would mean a modest decrease in power generation, plus a slight increase in the cost of electricity for islanders, he said.

In mid-January, Baker wrote to residents who live near the turbines with a promise to do several things about the noise level: "The first involves closing the air vents on the nacelles (housing for machinery). This is something that we have been planning on, and now that we have good baseline data we can close them and see if it reduces the sound level, particularly upwind."

Baker also said a mistake can be corrected in the gearbox ratio: “As part of our analysis of the output data from the turbines, it was discovered last week that this parameter was mis-calibrated during commissioning. There is some hope that adjusting this to the correct setting will change, and reduce, the sound coming from the gearbox.”

Baker wrote, “The third change is to alter the way the turbines’ computer manages the pitching of the blades and the torque on the generator. Currently, the torque on the generator must change by 20 per cent before the blade pitch is changed. This may result in modulation in the sound quality as the wind speed changes, and may make the sound from the generator more noticeable. GE (General Electric, which built the turbines) says that by changing this setting to make the blades pitch more often, and reducing the frequency of torque adjustments, the sound situation may improve.”

Baker said he is confident something can be done if people are willing to compromise. “There will be a measurable difference. Will it be perfect? No. Will it be silent? No.”

Baker said he spent the night in a summer home about 1,000 feet from the towers. Fox Islands Wind bought the building because the owners didn’t want to be next to the turbines. He acknowledged that he could hear the turbines, but said people react differently to noise.

Baker said he thinks the generators could be insulated, but he is not sure the noise of the operation will change. In the end, he believes “the community wants it to work,” including those people who complain about the noise. He pointed out that several decades ago, before a power line to the mainland, many Vinalhaven residents could hear a diesel generator running day and night in the village of Carvers Harbor.

That may be small comfort to people such as year-round Vinalhaven resident Barbara Santa-Coloma, who said, “I personally feel heartsick at the prospect of what the future holds for us. It’s the loss of our dreams as well as loss of revenue. These things have been stolen from us.” She said noise from the turbines, not far from her house, is impossible for her to ignore.

Pingree recently submitted a bill, HR 2183, An Act To Amend the Laws Governing Noise Limitations on Wind Turbines. It’s been accepted for the current Legislative session but Pingree said there is no language drafted yet.

Said Pingree: “Two towns in my district, North Haven and Vinalhaven and their local community-owned co-op, have just put up three large turbines. Through that process we have learned a lot about wind noise standards and the reality is that the current noise rules [don’t] sufficiently protect neighbors and at times they don’t make sense for the project in terms of producing energy either.”

Pingree said she is not sure if a law is needed, or if there are other ways to resolve problems. “We are learning a lot on Vinalhaven from the neighbors and sound engineers and others, but it is still not definitive,” she said. Although facing a term limit that will prevent her from running for re-election, Pingree said she would encourage state regulators to study ways to resolve the noise issue around wind turbines.

Residents seem willing to work toward a solution, too. “Our objectives are to work something out,” said David Wylie.

Added Sally Wylie, “We think collaboration is the way to go.”

SIDEBAR: DEP questions Fox Island Wind's noise study

Fox Islands Wind used an unusual and possibly misleading method to calculate what area should be designated a “quiet zone” around its wind turbines, a state environmental official confirmed.

Jim Cassida, director of the Department of Environmental Protection's land resource regulation division, said when Fox Islands Wind collected its data it excluded periods when winds were below 3 mph. This skews the results by “taking out the quietest time,” he said.

The result could be allowing a higher noise level at Vinalhaven, Cassida said.

All other Maine wind power projects have used 24-hour measurements, with no excluded periods, he said. As a result of Fox Islands' deviation from the norm, the DEP has ordered that one of the three turbines be run at reduced power. “We didn't like the way they [Fox Island] modeled the sound for the project,” Cassida said.

New data will be collected, according to Cassida. Meanwhile, the permit to operate the turbines requires that one of them be run at lower speed to compensate for a noise level reading of 46 decibels, one decibel higher than is allowed under state regulations.

Fox Islands Wind, the for-profit arm of the Fox Islands Electric Cooperative, filed an appeal of the DEP's decision to require reduced-power operation, and also sought an amendment to its permit allowing full power generation. Cassida said the Attorney General's office concluded Fox Islands couldn't appeal the DEP permit and seek to amend it at the same time.

George Baker, the head of Fox Islands Wind, acknowledged the turbines are operating at reduced power: “In order to be in compliance with state sound regulations, we are operating Turbine 2 in ‘noise reduced operations’ between the hours of 7 p.m. and 7 a.m. every day. The project sustains a small reduction in power output as a result of this curtailment regime.”

Baker defended the method of measuring noise “during the hours that the facility will be operating,” arguing that Fox Islands Wind “should measure the ambient sound level during times when the wind was blowing, not when it was still.” He said that was a more accurate yardstick. He also said “wind in the trees is a significant source of ambient sound in a place like Vinalhaven.”

Fox Islands board member Addison Ames Jr., a Vinalhaven fisherman, said for now the appeal to the DEP is on hold. “We're trying to determine if the science was wrong. Hopefully, we'll answer that question,” he said.

Ames said he couldn't deny the turbines make noise if you're close enough to them. “The consensus around here is, it's like a jet in the air, in the distance — I can't see it but I can hear it — it's a jet that never lands.”

“I'm calling this a \$15 million experiment,” Ames said. “Can man and this machine get along together?”

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