

Wind power a possibility along the North Shore, study suggests

■ A UMD professor's yearlong effort yields evidence that areas from Two Harbors to Grand Portage could generate substantial wind energy

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A recent study has people talking about the prospect of wind power on the North Shore.

Mike Mageaux, a professor at the University of Minnesota Duluth, led a yearlong monitoring effort to assess the region's wind resources, and the results came as somewhat of a surprise: Several North Shore locations have winds that are strong and consistent enough to generate electricity efficiently.

Previously, Mageaux said, "The state wind maps showed virtually no wind up there."

But Mageaux had helped the Grand Portage band of the Minnesota Chippewa tribe site a turbine to power its casino and said: "We found there was a really good wind resource there. It got me thinking that there also might be a resource up and down the shore."

He collected a year's worth of data from seven monitoring stations and found several areas around Silver Bay and Finland that appear to offer suitable conditions to support wind power. Mageaux also found pockets of consistent strong winds at higher elevations near Two Harbors, Grand Marais, Lutsen and Hovland.

Mageaux clocked sustained average winds of 14-19 mph along the shore,

To put that in perspective, consider that wind speeds average about 16 mph on southwest Minnesota's Buffalo Ridge, an area that's home to massive wind farms.

"I don't think we're surprised to find isolated pockets of good wind in the high bluffs of that [North Shore] region," said Eric Norberg, Minnesota Power's senior vice president of strategy and planning, of Mageaux's study. "It's kind of a matter of topography."

But Norberg said he doesn't see the sort of broad areas that would appear suitable for the development of a large-scale wind farm. He noted that many of the upland sites identified in the study would be difficult to access with heavy equipment.

Migrating birds and bats could pose another challenge, said Gerald Niemi, a UMD biology professor at the [Natural Resources Research Institute](#). Migrating birds often follow the shoreline of Lake Superior because they generally avoid crossing large See Wind, Page A2

bodies of water, and a line of wind turbines could pose a new barrier.

Niemi said a wind farm on a flyway in Altamont Pass, Calif., kills more than 1,000 birds of prey every year, according to a report from the California Energy Commission.

"I'm absolutely supportive of wind energy," said Niemi. "But we need to be careful where we site wind turbines."

Any large-scale wind



farm probably would require the installation of new transmission lines on the North Shore. And this, too, is of concern to Niemi, who said: "It could lead to the fragmentation of the landscape in an area that currently functions as a large contiguous forest."

Mageaux agreed that installing new transmission could stir controversy and suggested the North Shore might be better suited for small and mid-sized wind power projects in the order of one to 10 megawatts. He believes such development could be encouraged with the help of state or federal incentives.

But he said special consideration should be given to the siting of turbines.

"The North Shore is treasured as a very beautiful area, and lot of people probably don't want to look at these things."

But interest in North Shore wind power seems to be growing, said Mageaux, who added he recently has been working with groups considering small-scale projects in Grand Marais and Silver Bay.

"Now that we realize there's a wind resource on the North Shore. The question is how we might put it to use," he said.



Wind turbines stand ready for action at the Oliver County wind farm Center, N.D. A recent study indicated that there is enough wind power along parts of the North Shore to efficiently generate electricity through turbines. *File / News Tribune*

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