

Winds of change

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Wind farms can be self-sustaining, concluded two Northeastern finance professors in a recent journal article. A few measures to increase productivity and decrease equipment costs could reduce the current dependence on government subsidies and incentives designed to make wind farms viable.

The Northeastern researchers contend that [wind farms](#) could be self-sustaining operations even if the current governmental production tax credit, which pays 1.9 cents per kilowatt-hour, were eliminated. Their work appeared in the May 2009 issue of *Renewable and [Sustainable Energy](#) Reviews*.

Anand Venkateswaran, assistant professor of finance and insurance, and Jonathan Welch, a member of the business faculty from 1977 until his death in 2009, collected and analyzed 15 years of data from approximately sixty 100-turbine wind farms. Noting that a productive wind farm generates electricity 40 percent of the time, or 12 days a month, Venkateswaran suggested that increasing [productivity](#) to 53 percent, or 16 days a month, would eliminate the need for subsidies typically needed to keep such operations afloat.

“There are a couple of ways that production could be increased,” he added. “Lighter blades on the turbines would be one way to improve efficiency; siting farms in windier spots would be another.” And the profitability of wind farms could also be improved if the cost of turbines, which averages approximately \$3.2 million per unit, were reduced, he said.

While the researchers noted that key questions remain about whether wind energy is financially sustainable without “extensive” governmental support to create and nurture the overall growth of the industry, they concluded: “Wind energy can provide the best of both worlds. It is sustainable from an environmental perspective and it is becoming sustainable financially.”

Provided by Northeastern University ([news](#) : [web](#))

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