

PLEASE SEE PAGES 3 AND 4 FOR PROFILE OF
ECG ENGINEERING'S WORK WITH SCHOOL DISTRICTS
ON WIND ENERGY



Subsidies fuel push to harness LI's wind for energy

**October 31, 2009 by JENNIFER MALONEY /
jennifer.maloney@newsday.com**



Last year, Roger Jette turned down an eye-popping offer to relocate his [Bay Shore](#) factory to the state of Georgia. They would have given him land, architects to design his building, tax breaks, and \$5,000 for every Georgian he hired. Instead, he found a way to stay here and still trim expenses, by tapping into a little-used but plentiful [Long Island](#) resource: wind.

With the exception of the occasional tower on the East End, wind turbines are a rare sight on [Long Island](#). But prompted by a [Long Island Power Authority](#) rebate and federal tax credits and deductions, they're sprouting up farther west as homeowners, farmers, towns, school districts and businesses like Jette's look to reduce, or even eliminate, their electric bills.

Encouraged by federal grants, investment in large-scale wind farms is growing nationwide. And while the idea of an offshore wind farm in the Atlantic remains a political football, a movement is growing for stand-alone windmills on land.

Jette owns Snake Tray, which designs systems for organizing cables in office spaces. With the help of the LIPA rebate and tax breaks, Jette plans to erect a wind turbine - a sleek, white Northwind 100 - next to his factory in an industrial zone near the Sagtikos State Parkway. Stretching 156 feet from the base to the blade tip, it is expected to generate more than 100,000 kilowatt-hours per year, catching southwest winds from the bay.

"We're going to zero out our electric bill," he said.

That bill is \$55,000 a year.

Economies of scale

Led by the Town of [Islip](#) - the first Long Island town to develop standards for wind turbines in backyards, business and industrial zones - [Brookhaven](#) and [Huntington](#) are mulling such policies and the [Suffolk](#) County Planning Commission is developing a code that other towns could adopt.

On the more rural East End, [Riverhead](#) and [Southold](#) allow turbines on properties larger than 7 acres and [Southampton](#) requires a setback equivalent to the tower's height.

Wind experts say that small-scale residential turbines - which [Islip](#) limits to 45 feet tall - typically won't capture enough wind to make them economically viable.

But Long Island could soon see a handful of taller towers - at a [Peconic](#) vineyard, a [Laurel](#) tree farm, Jette's [Bay Shore](#) factory and the Sachem school district. Such turbines, which generate up to 100 kW and stand more than 120 feet tall, represent Long Island's greatest wind potential: commercial and community wind projects.

"It's starting out slow, just like the solar pioneers did," said LIPA president Kevin Law, who has received 14 applications for wind rebates since the program began in January. One is up and spinning; seven others have received approval.

Islands are great places to catch wind. Here, powerful winds blow on the North and South Shore beaches and sweep across the East End. And a combination of incentives is making wind turbines more affordable: the LIPA rebate, which covers up to 60 percent of the total installation cost; a federal tax deduction allowing 50 percent depreciation of a wind turbine in the first year; and a state law that lets school districts, municipalities and other agencies pay for turbines with future energy savings.

Weighing potential, impact

Wind technology is not a silver bullet for the country's dependence on foreign oil. It performs best in winter and worst during the high-demand summer months. And people are still concerned about how turbines look and sound.

Technology has improved so that a 35-foot Skystream 3.7 emits a quiet hum, not unlike a ceiling fan. But the desire to limit windmill height in residential neighborhoods conflicts with a basic principle of wind energy: the higher, the better.

"If it doesn't make dollars and cents, you're putting up a lawn ornament," said Al Harsch of Eastern Energy Systems, a [Laurel](#)-based company.

[Brookhaven](#) Councilman Steve Fiore-Rosenfeld (D-[East Setauket](#)), who hopes to hold a hearing in December on guidelines for residential and commercial turbines, noted that they must rise above the treetops to be effective.

"I've been struggling with it," he said. "We want homeowners to be able to recoup their investment and at the same time not negatively affect the viewscape."

[Huntington](#) is considering applying for a \$19,000 state grant to study use of turbines to power restrooms at beaches and lights on town sports fields, said Terese Kinsley, Huntington's chief sustainability officer, a position created earlier this year.

Islip, too, is continuing to research what wind can accomplish. Results of wind measurements at [East Islip](#) Marina could lead to installation of a windmill to power the marina's buildings and the lights for its ballfields, officials said.

Not just a science project

Meanwhile, five school districts have hired a [Smithtown](#)-based engineering firm to explore wind energy as part of larger projects aimed at reducing electricity bills, said Kendra McQuilton of the company, ECG Engineering.

And Sachem High School East in Farmingville is on track to become the first Long Island school with a windmill.

A \$143,000 turbine is part of a \$16-million plan to increase the efficiency through new boilers, lights and solar panels.

The turbine - a tenth as powerful as the industrial model Jette intends to install - is expected to cut the school's \$600,000 annual LIPA bill by \$2,000. McQuilton said the district opted for a cheaper turbine so it could spend most of the funds on capital improvements.

"With the latest technology, at no cost to the community, we'll make our buildings more efficient and lower our energy consumption," said Bruce Singer, associate superintendent for business.

The district plans to take out a loan and repay the full amount with money saved from its electric bill over the next 18 years. And there's a bonus: The state will kick in a sum equal to 66 percent of the total cost of the project.

The high school is on the side of Bald Hill, which at 331 feet is the third-highest point on Long Island.

On a recent afternoon, Principal Rory Manning stood on the school's expansive roof and pointed to a small metal box wrapped in blue-green tape: a student-built cosmic ray detector, with wires running into the science classroom below. Nearby, another student experiment measures lightning strikes.

"Schools are the center of their communities," he said. "If we can share that message, the sense of how important it is to conserve our natural resources, hopefully it becomes important to the whole community."

Higher up the hill, a 10-kW Bergey wind turbine poked above a stand of trees. It supplies 10 percent of the power for a wastewater treatment facility next to Brookhaven Town Hall.

Sachem will have the same model.

And if all goes as planned, when Manning's seniors graduate in June, it will be spinning in the background.