

# Winds of change

*School that lost roof to tornado winds will get a turbine on its roof to generate power*

**BY ROB FAULKNER**

In the fall of 2005, a rare tornado's wind power tore the roof off of Lawfield Middle School on the Mountain.

This fall, the Hamilton-Wentworth District School Board plans to harness that power, by installing a wind turbine on the roof of a rebuilt Lawfield school.

The news, announced by trustee Ray Mulholland yesterday, comes as the board puts new focus on its multimillion-dollar energy bills and explores alternative sources.

It's one of 60 pilot projects planned this year by Ancaster's Cleanfield Energy Corp., which makes a unique egg-beater style wind turbine for rooftops.

At an unveiling yesterday, the firm revealed its new, blue Cleanfield V3.5.

Education had a central role at the launch. The HWDSB announced the Lawfield pilot; McMaster University explained its help on research and development; Mohawk College revealed its own pilots and its plans to start a program to train turbine installers.

Richard Francki, senior manager of facilities management at the HWDSB, said the board will pay for installation and Cleanfield will donate a vertical-axis wind turbine (VAWT), which

retails for about \$15,000.

Cleanfield is an alternative-energy company founded in 2002 by Mihail Stern, Alexander Trica and Tony Verrelli. Listed since 2006 on the TSX Venture Exchange (as AIR), they have 20 staff here and in North York. Its president, Verrelli, grew up in Stoney Creek.

The firm's pilot projects are showcasing its technology: Cleanfield says its turbine can generate 9,000 kilowatts per year, when an average North American house uses about 9,500 kilowatt hours annually.

But turbines to power every school? Not with just one. A board report noted the board's top hydro users from 2004 to 2007, Ancaster High, used 5.1 million KWh. That's a lot of wind.

Francki admits one turbine will generate a tiny slice of Lawfield's needs, but will link to environmental education and will be watched in case the board wants to add more turbines.

Verrelli said a turbine will "go live" next week atop the old Camco building in the McMaster Innovation Park. One is already on a City of Hamilton business facility in Flamborough, another on Cleanfield's Ancaster headquarters, and a small wind field will operate at a provincial facility in Kenora.

Verrelli said Cleanfield took an April order for 118 units, so you may see more VAWTs popping up locally. Mayor Fred Eisenberger says Hamilton must install a turbine on City Hall before Toronto does.

Cheryl Jensen, vice-president of Mohawk's technology, apprenticeship and corporate training, said the college will install two turbines by fall at on its new skilled trades and apprenticeship training institute in Stoney Creek. Four will go on the Fennell campus this year.

She said turbines will power the institute's energy lab, and notes Mohawk is developing a certification program to train installers of wind turbines.

At Mac, mechanical engineering department professor Stephen Tullis says his team's research has moved way beyond the "Does it work?" phase.

Now, it's improving on existing models. He said the turbine needs a 10 km/h wind to make energy, but notes questions remain about how a roof full of turbines will work.

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CATHIE COWARD, THE HAMILTON SPECTATOR

**Tony Verrelli, president and CEO of Cleanfield Energy Corp. unveiled the new V3.5, a vertical-axis wind turbine, at their headquarters in Ancaster yesterday.**