

# Living 'off the grid'

## Soaring energy costs drive interest in alternative sources

BY MIKE ADLER  
Staff Writer

The solar panels on the shed roof put out the same amount of power as they did in 1982.

Installed at the Kortright Centre for Conservation in Vaughan, they formed the first roof-mounted, grid-connected solar energy system in Canada.

And those panels should work for another 20 years, perhaps long enough to see solar and wind power in Ontario move beyond the fringe of energy production.

In the meantime, energy bills are going up and Alex Waters' classes on alternative energy at Kortright are selling out.

For years, cheap electricity held wind and solar back. But these cleaner alternatives are getting new life, thanks to the bite of higher fossil fuel prices, evidence of global warming and tales of the costs and chaos electricity deregulation brought to California.

Suddenly, such technology is within reach for many cottagers or those dogged individualists who want to live "off the grid".

They usually choose a combination of wind power (best in winter months) and solar (best in summer).

"It's becoming more and more practical every day," Waters, a renewable energy specialist with the Toronto and Region Conservation Authority, told a study group viewing Kortright's working wind turbines and solar energy collectors last Saturday.

Wind is the fastest-growing way of generating electricity in the world, Waters said. Denmark gets a 10th of its electric power from wind turbines and hopes to get half by 2030.

Windmills, such as the ones that once drew water on many Ontario farms, have a set of fan blades. Modern turbines, built to generate power, have slender propeller blades, usually as few as two or three.

To choose your alternative energy system, Waters said, you have to understand the technology, know how much wind and sun gets to

your property, and most importantly, you have to know how much energy you need.

"The other thing you need is guts," Waters added. "When you have wind generators, there are times you have to go to the top of the (turbine) tower to check it out."

Turbines also have tails that take the blades out of the wind when they reach extreme speeds.

The centre's 10-year-old Bergey turbine (60 feet tall and generating 10 kilowatts an hour) has been brought down for maintenance checks every five years.

Kortright, which offers 14 sets of seminars each year on alternative energy, was also the site of Canada's first demonstration of solar shingles two years ago.

*'The more we research it,  
the more sensible  
it seems to become.'*

Toronto residents Judy and Cameron Gardner attended Waters' class because they want to build a house on Georgian Bay. Their site isn't serviced by the local hydro company, so they weighed solar and wind against the considerable cost of installing utility poles.

"The more we research it, the more sensible it seems to become," Cameron Gardner said.

Prometheus Energy, a York Region business that is Canada's oldest supplier of independent electrical generation systems, installs them at 200 cottages and 20 homes a year, mostly in remote areas off the hydro grid.

"People are making the decision to go remote now because they know they can have a power supply," company president Rob McMonagle said.

Such systems aren't yet competitive with utility power, but eventually they will catch up, he argued. Ontario is heading for electricity deregulation and Prometheus is not above using headlines about a deregulated California's electrical shortages and price increases to make a point.

The Concord-based company, which started in a former Richmond Hill gas station in 1979, has also sold its technology in at least 40 countries.



STAFF PHOTOS/ERIN RILEY

Alex Waters teaches an alternative energy class at the Kortright Centre for Conservation. The centre also has wind turbines (right) and solar panels (below).

## ALTERNATE ENERGY SOURCES

*If you're interested in solar or wind power, the Internet offers many contacts. Here are a few:*

• The Solar Energy Society of Canada:  
[www.solarenergysociety.ca](http://www.solarenergysociety.ca)

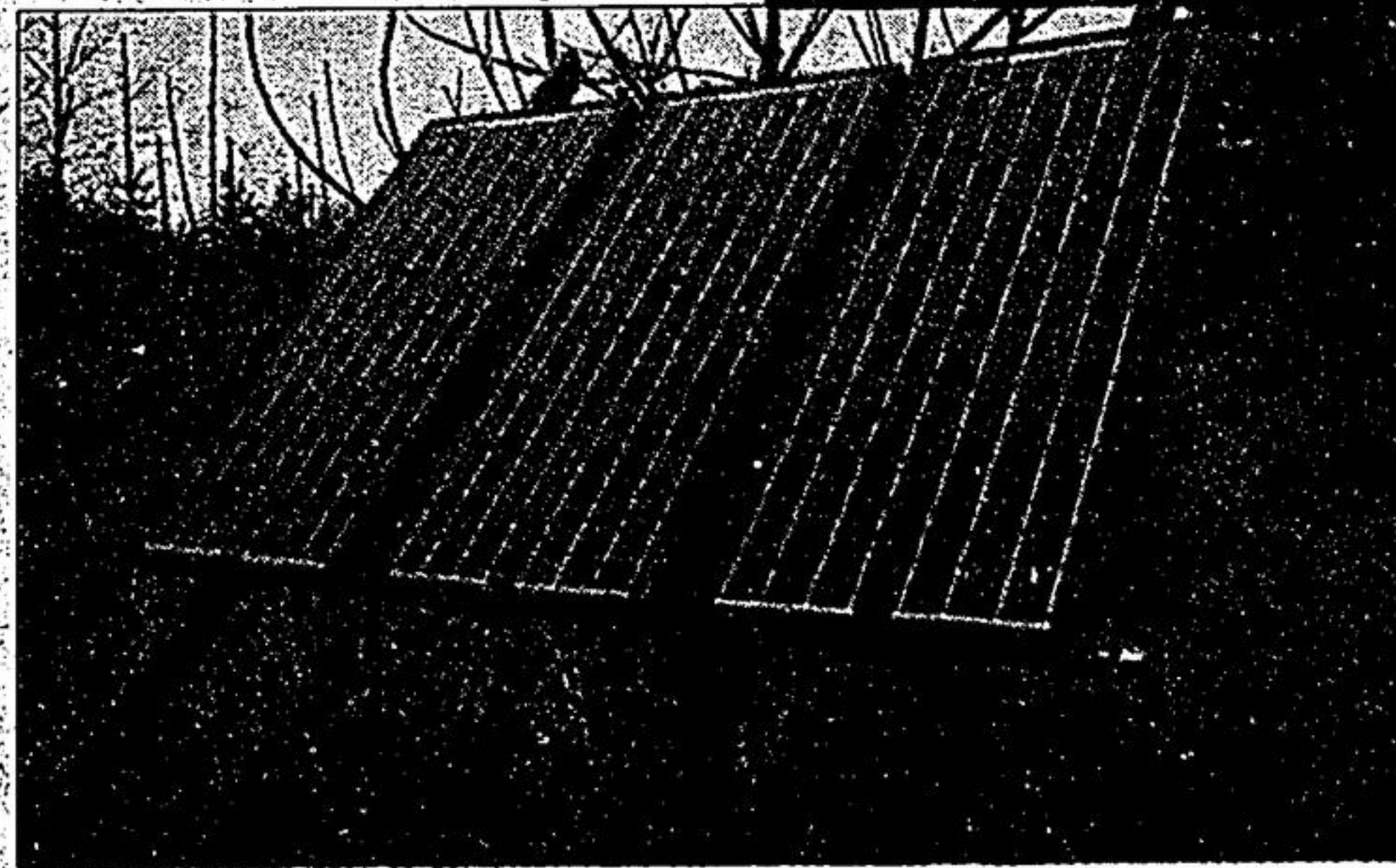
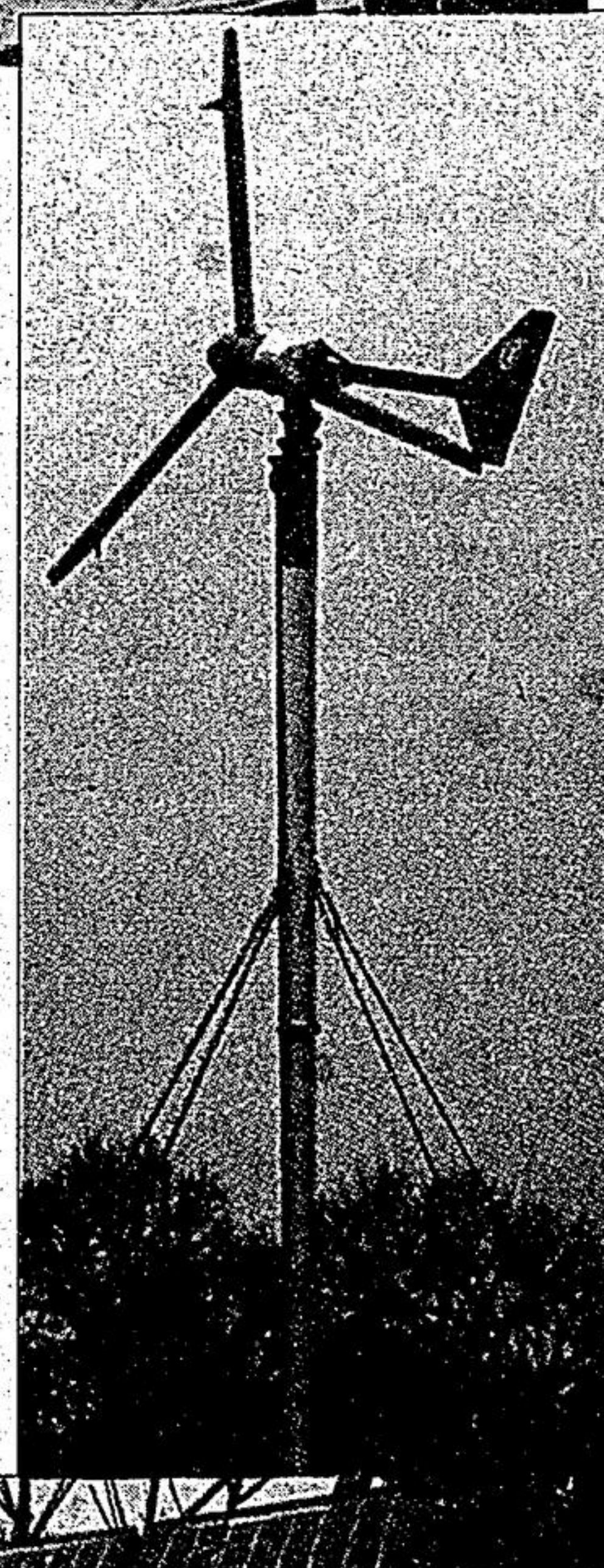
• The Kortright Centre for Conservation:  
[www.kortright.org](http://www.kortright.org)

• The Canadian Wind Energy Association:  
[www.canwea.ca](http://www.canwea.ca)

• Real Goods, a catalogue of items for sustainable living: [www.realgoods.com](http://www.realgoods.com)

• Concord's Prometheus Energy:  
[www3.sympatico.ca/prometheus.energy](http://www3.sympatico.ca/prometheus.energy)

Canada's federal government also publishes free buyer's guides to wind energy and photovoltaic solar systems.



## York waits to get wind of clean power

BY MIKE ADLER  
Staff Writer

This summer, Toronto is getting its first wind turbine.

It will stand 20 storeys tall near the Ashbridge's Bay sewage plant, producing clean electricity from breezes blowing off Lake Ontario.

Meanwhile, Pickering politicians heard last month their city might get its own waterfront turbine this year, a prototype built by Ontario Power Generation.

OPG (part of the former Ontario Hydro) also has a "wind farm" — several turbines standing at one of its nuclear stations — set to start harvesting next year.

So when might York Region, currently merging its town-based hydro utilities into one company, start producing some electricity from the wind?

Not any time soon, suggests Paul Ferguson, president of AmalCo, the future regional utility. "It's just premature to start actively getting involved in things like that," he said this week.

### WAITING FOR APPROVAL

One reason, Ferguson said, is the time-consuming task of setting the new utility up for business. AmalCo (a temporary name) is waiting for official approval to combine the old hydro utilities of Aurora, Markham, Newmarket and Vaughan, and to buy Richmond Hill Hydro.

Another problem is the "wires-only" nature of York Region hydro companies.

OPG and Toronto Hydro can build wind turbines and sell "green energy" to customers because they are licensed generators of power. The York hydros, except for one special arrangement made for a new IBM lab in Markham, are not.

Ontario's electricity deregulation, which should allow consumers to choose green power, makes it tough for AmalCo to start harnessing wind.

To run wind turbines, the new utility needs to start a separate company for generating systems and that company must meet the requirements of the Ontario Energy Board.

"It's more restrictive now than it once was," argued Colin Parmenter, president of Richmond Hill Hydro.

Ferguson said AmalCo's future business plans could examine alternative energy options and how much more people are willing to pay for them. "That's always the issue," he noted.

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