



Real Estate Edge

Homeowners look to go off electrical grid

Environmental self-sufficiency driving market

By James Bow
Business Edge

Kevin Marwick does not tilt at windmills. He builds them. Marwick owns Cyclone Wind Generators, operating out of his home in Qualicum Beach on Vancouver Island. His turbines are smaller than the megawatt-producing commercial wind farms going up across Canada; they are designed to meet the energy needs of a home.

"I'm not one of those guys who eats nuts and berries, and runs around with hemp clothes or anything," says Marwick. "I'm just a normal guy."

And he prides himself on the quality of his product.

"Four years ago, I was buying and selling American windmills in Canada, and I found that they were really crappy," says Marwick. "They overstated their outputs and were somewhat flimsy. They didn't get their full power until 30 miles per hour of wind. You get that type of wind one day a month."

As complaints mounted, he started searching for a better design.

"I found a Chinese company who had a windmill that was sturdy, and I tried them out," says Marwick. "These were putting out their full output at 17 to 20 m.p.h. So, we improved things from there."

He supplied design schematics and improvements, tested various prototypes and now Marwick's Cyclones are manufactured by the Chinese company. They can produce between 200 watts and 10 kilowatts of power, and are ready to be marketed widely.

"We've tested these windmills through customers and we're going to make a serious run in 2007," says Marwick. "They're holding together and producing well. This year, we've made them pretty and streamlined the manufacturing process."

Marwick is entering a growing market for devices designed to power properties that are "off the grid," meaning that they have no access to any electrical supply. Not only do small-scale generators such as windmills or



Photo courtesy of Solarpanel.ca

Shane Johnson checks out the power inverter that transforms wind and solar energy into power his appliances can use.

solar power generators provide electricity to people on remote properties, they're finding a market with individuals looking to take their homes off the grid.

"It's about environmental awareness and self-sufficiency," says Shane Johnson, who owns Solarpanel.ca. "A lot of people attending my seminars are spitting mad about the service from their electrical providers. Other people are environmentally aware and just want to go in that direction."

Johnson, of Duffield, an hour west of Edmonton, sells solar panels and teaches seminars on how to get homes off the grid. Despite his company's name, he distributes Marwick's Cyclone wind turbines as well as compact fluorescent lightbulbs, LEDs and other devices designed to reduce a home's power consumption without sacrificing comfort.

"It was never my goal to get into this," says Johnson. "Then I found this parcel of land that was a 300-foot walk from the end of the road just to get to the corner of the plot. We bought the property, and I asked the rural electric authority how much it would be to provide service. They said: \$27,000 plus construction costs. I thought: I could do better than this."

"It was frustrating at the beginning, because I found that the people who sold the equipment didn't use it themselves," he adds. "After learning through the school of hard knocks, I decided to give a seminar on my experience."

"I put an ad in the paper, and suddenly I'm doing two seminars a month, with people asking me where to get the best equipment. So I started selling

the equipment. In my seminars, you get to see a live operating system. I live with what I sell."

Governments and power companies are looking at this small but growing movement. Gordon Shields, co-ordinator of the Net Zero Energy Home Coalition, welcomes these efforts. The Net Zero Energy Home Coalition hopes that, by 2030, all new homes built in Canada will return at least as much power to the electricity grid as they purchase.

"Our goal is not to get houses off the grid," says Shields. "We're looking to diversify the energy market as well as reducing our environmental footprint. This means a whole-house approach that includes advanced energy-efficient home design and integrated onsite renewable energy technologies."

The coalition has been working with the Canadian government to put together a set of guidelines that the private sector can easily and inexpensively implement.

"Canada Mortgage and Housing Corp. is helping to launch a demonstration phase of six to 12 homes next year. That may not sound like much, but there's a learning curve we have to go through, to put a package together that's simple enough to be copied. We are aiming to see up to 1,500 demonstration net zero-energy homes over the next four to five years."

Allowing solar or wind-powered homes to sell back excess power to the grid could allow the power industry to decentralize production rather than relying on new, expensive and disruptive large power plants. Ontario Power Generation has set up the Ontario standard

offer program, buying power at set rates for small-scale wind and solar power projects. Although intended for commercial producers, individuals including NDP Leader Jack Layton and his wife have been able to sell solar power generated by their own home back to the grid.

Getting off the grid isn't a simple matter. Windmills must be on towers to raise them above such windbreaks as houses and trees. Zoning regulations and concerned neighbours can make installation difficult. "Within Parkland County, where I live, you cannot have anything higher than 49 feet unless you make application," says Johnson.

In addition, each home must be carefully assessed.

"If you have a good wind site, I suggest more turbines and fewer solar panels, because you can make a tremendous amount of power from wind and you can make it in the middle of the night," says Johnson. "It's also cheaper. With our new models, our customers are looking at a \$2,800 investment for a one-kilowatt turbine. To get a kilowatt from solar would cost \$8,000."

Batteries can store excess power for use during peak periods, but with the typical Canadian home consuming between 650 to 750 kilowatt hours a month, conservation is key to a successful wind or solar power installation.

"There is a lot of people can do

here, even reducing your lighting wattages by going to compact fluorescent, or LEDs," says Marwick. "There are bulbs that can give you 100 watts of light for one watt of power. If you're looking at a windmill that produces 300 watts of power and you can only run three lightbulbs off it, what's the point? But if you can run 300 LED lights off it, that makes a difference."

"Any good installer assesses a customer's power consumption and suggests where one can cut back," he adds. "It ensures their purchase is going to work. That's key to customer satisfaction."

Dan Takahashi, who runs Enersol Solar Products out of Campbellville, about one hour northwest of Toronto, cautions that getting off the grid may not be for most consumers, yet. He sells solar water heaters and pool heaters, which recoup their investment within seven years.

However, with Canadian electricity rates among the least expensive in the world, consumers looking to retrofit their home find it can take 15 years or more to recoup their investment.

"When the cost of electricity goes up, even if it aligns with the North American market, this will change," says Takahashi. "New Yorkers pay 28 cents per kilowatt hour; we're at six to eight cents."

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QUARTERLY EARNINGS REPORTS

Recently published financial data on publicly reporting companies based in Canada. The following is sorted by each exchange according to the year-over-year increase (highest first) in quarterly revenue of Canadian companies that published results in the period from 11/17/2006 to 11/30/2006.

As of	Symbol	Earnings per share		Net income		Revenue		Change
		Latest	Year ago	Latest	Year ago	Latest	Year ago	
TORONTO STOCK EXCHANGE								
Discovery Air Inc.	10/31/2006 DA.A	.05	0	4,265	17	22,133	1,525	+14-fold
BioSyntech Inc.	9/30/2006 BSY	-.02	-.04	-2,034	-1,605	3	1	200%
Millenium Biologix Corp.	9/30/2006 MBC	-.05	-.05	-6,401	-3,687	559	314	78%
Lanesborough Real Estate Investment Trust	9/30/2006 LRT.UN	-.06	-.05	-1,010	-486	8,370	4,846	73%
Pacific & Western Credit Corp.	10/31/2006 PWC	.11	.13	1,482	1,756	18,677	13,845	35%
March Networks Corp.	10/31/2006 MN	.09	.32	1,428	5,114	26,320	19,849	33%
National Bank Of Canada	10/31/2006 NA	1.33	1.22	215,000	202,000	1,755,000	1,351,000	30%
RBC Financial Group	10/31/2006 RY	.97	.4	1,236,000	515,000	9,738,000	7,665,000	27%
Agricore United	10/31/2006 AU	-.16	-.29	-6,834	-12,995	706,802	565,894	25%
Rogers Sugar Income Fund	9/30/2006 RSI.UN	.19	-.94	16,634	-81,930	150,994	120,631	25%
La Senza Corp.	10/28/2006 LSZ	.62	.19	8,535	2,624	117,932	97,124	21%
MOSAID Technologies Inc.	10/31/2006 MSD	.43	.37	4,715	4,292	19,594	16,253	21%
Alimentation Couche-Tard Inc.¹	10/15/2006 ATD.B	.439	.307	88,564	63,181	3,271,900	2,722,939	20%
TM Bioscience Corp.	9/30/2006 TMC	-.12	-.07	-5,646	-3,089	2,621	2,208	19%
Tundra Semiconductor Corp.	10/29/2006 TUN	-.01	.07	-211	1,385	21,965	18,625	18%
The Descartes Systems Group Inc.²	10/31/2006 DSG	.011	.022	503	705	15,075	12,879	17%
Bank of Montreal	10/31/2006 BMO	1.37	1.31	688,000	656,000	4,788,000	4,145,000	16%
DataMirror Corp.¹	10/31/2006 DMC	.235	.067	1,486	600	13,305	11,708	14%
Comnetix Inc.	8/31/2006 CXI	-.04	-.09	-535	-1,063	2,767	2,451	13%
Le Chateau Inc.	10/28/2006 CTU.A	1.38	1.03	8,352	6,143	77,841	69,231	12%
Reitmans (Canada) Ltd.	10/28/2006 RET.A	.33	.28	23,390	19,238	258,602	238,613	8%
Tembec Inc.	9/30/2006 TBC	-.64	-1.58	-54,500	-134,900	863,000	816,800	6%
North American Energy Partners Inc.	9/30/2006 NOA	-.26	.62	-4,800	11,500	130,100	124,000	5%
George Weston Ltd.	10/7/2006 WN	1.62	1.41	226,000	196,000	10,085,000	9,694,000	4%
Bombardier Inc.¹	10/31/2006 BBD.B	.045	-.011	82,969	-10,091	3,798,626	3,701,081	3%
Van Houtte Inc.	10/14/2006 VH	.2	.24	4,263	5,097	86,439	84,315	3%
Rutter Inc.	8/31/2006 RUT	-.02	-.02	-849	-835	18,891	19,058	-1%
Plaintree Systems Inc.	9/30/2006 LAN	0	0	275	-150	528	540	-2%
Exco Technologies Ltd.	9/30/2006 XTC	.08	.09	3,141	3,568	54,031	58,074	-7%
TecSys Inc.¹	10/31/2006 TCS	-.056	0	-775	30	8,484	10,271	-17%
Epic Data International Inc.	9/30/2006 EKD			-1,934	-925	2,458	3,361	-27%
TSX VENTURE EXCHANGE								
NIR Diagnostics Inc.	9/30/2006 NID			1,323	-524	2,112	27	+77-fold
Tuscany Energy Ltd.	9/30/2006 TUS	0	-.01	-111	-160	700	10	+69-fold
Trimox Energy Inc.	9/30/2006 TRM.B	-.03	-.01	-436	-59	3,521	95	+36-fold
Palmarejo Silver and Gold Corp.	9/30/2006 PJO	.01	0	484	60	595	18	+32-fold
NOT PUBLICLY LISTED								
Ontario Power Generation Inc.	9/30/2006 NA			167,000	181,000	1,435,000	1,571,000	-9%

¹Originally quoted in U.S. dollars (translated into Cdn dollars based on the interbank exchange rate on the last day of the period in question).

²Originally quoted in U.S. dollars (translated into Cdn dollars based on the interbank exchange rate on the last day of the period in question) and in accordance with U.S. GAAP.

Source: Canada NewsWire

All dollar amounts – except earnings per share, which are basic – are in thousands of Canadian dollars (conversion from U.S. dollars comes from the exchange rate on the last day of the given period according to the interbank rate on www.oanda.com).

While *Business Edge* strives to check this information carefully, accuracy cannot be guaranteed. The companies' own published statements, therefore, should take precedence where there is a discrepancy.

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Technology on hand, but not incentives

"Everybody's interested in it," he adds. "I get calls every day with people wanting to get off hydro or reducing their hydro bill."

As energy prices increase, Marwick and Johnson believe interest in personal power will grow.

"I don't know the industry numbers, but I'm awfully busy," says Johnson. "I tripled my business from last year, and none of this is government funded. If the government were to offer rebates, say, for solar panel systems for homes, as they do in California, then it's going to go crazy."

"It's possible to take houses off the grid right now," says Marwick. "The technology is

there, but there is no incentive on the federal level to conserve. This is needed now, and not in 2050. You're going to need fossil fuels for a lot of things in society, like running farm tractors.

"It would be ridiculous to assume that solar and wind will solve all our problems, but there's no reason we need 250 gallons of fuel oil to heat our home. If we get on this now, there may be enough fossil fuels to last the time we need."

Web Watch:

www.cansia.ca

www.cyclonewindpower.ca

www.enersol.com

www.netzeroenergyhome.ca

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Province raises its minimum wage

Business Edge

Ontario is raising the general minimum wage on Feb. 1 to \$8 per hour.

The raise is the final increase in a four-year initiative that began Feb. 1, 2004, when the minimum wage rose for the

first time since 1995, going from \$6.85 to \$7.15 an hour.

Ontario's current general minimum wage is \$7.75 per hour. The rise in the minimum wage to \$8 was phased in over a four-year period to allow Ontario business time to adjust and remain competitive.

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