

# Opportunities exist in alternative energy

By Anne Pappmehl

**W**hile oil prices are falling, investment in the clean-technology sector is rising. As of Sep. 30, clean technology boasted its ninth consecutive quarter of growth with a record \$933 million invested.

That doesn't mean that every clean-tech company is a good investment prospect. Here are a couple of stories, though, that I think are worth pursuing. One is **Arise Technologies Corp.** (APV-TSX/VEN, \$0.30, 519 725-2244, [www.arisetech.com](http://www.arisetech.com)). Until recently, this Kitchener-based systems-engineering firm was installing solar systems in Ontario, a market not very much interested in solar. While simultaneously collaborating on some research and development with the University of Toronto, the company found a way to produce a hybrid photovoltaic cell, which is 18 per cent efficient. The industry average is 15 per cent.

This innovation is pushing Arise into an entirely different business vertical, "solar-cell manufacturing" that has the potential to turn this regional company into a global player, says Massimo Fiore, equity research analyst with Loewen, Ontaadje, McCutcheon in Montreal.

"First of all, the more-efficient cell is going to fetch 20 per cent higher value, because you can produce more energy with it," Mr. Fiore says. "It's basically 180 watts per square metre over 150 watts per square metre, and buyers will pay a premium for that."

Second, the analyst notes market conditions have never been better:

"You can't make enough cells fast enough. People all over the world are buying them. Japan is producing electricity with solar photovoltaics, which is competi-



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tive with the grid without the need for subsidies. It's going mainstream in California, and there's a huge market in Germany."

## Sell power back

Even local markets are becoming more receptive, he says, noting that new government subsidies and programs are being created to encourage solar use. For example, with the most recent Feed-In Tariff for Renewables in Ontario (as of November 2006), customers using a solar system have the option to sell power back to the grid for four times what they would normally pay. I'd say that solar is the best renewable-energy story right now."

Fiore has a buy recommendation and a 12-month target price of \$1 on the stock. He bases his revenue model on the company's strategic plan to start building solar cells at a proposed manufacturing facility in eastern Germany.

Pending approval, Arise's first production line is scheduled to start 12 months after all the funding is in place, and the second line to start shipping six months after that. The company plans to have all the required funding in place within the next 90 days.

"In total, this plant should be able to produce 80 MW of solar cells per year when both lines are active," says Fiore, adding that the revenue potential is great.

"The current price on a cell is about \$3.50/watt so that's about U.S. \$280 million annual revenue on a plant. This is quite a different story from where they were before — a respectable solar company, generating about \$1 million in annual revenue from installations."

Fiore believes that the company's ability to establish sound strategic partnerships bodes well for its future production capabilities. "The company's March 2004 R&D collaboration with Komag

could potentially enable the company to start producing cells all over the world." Komag is a U.S. developer and manufacturer of thin-film disk-drive platters.

Another clean-tech company that is coming into its own is **VRB Power Systems Inc.** (VRB-TSX, \$0.60, 604-697-8820, [www.vrbpower.com](http://www.vrbpower.com)), a Vancouver-based company that deals with battery storage.

VRB produces the Vanadium Redox Battery Energy Storage System, which can store electricity in bulk (multi-megawatt hours) for up to several days. The stored energy can be delivered on demand and can take energy input from any source: grid, hydro, diesel generator, solar and wind.

I first wrote about this company two years ago, when it was just starting to commercialize, and there was no analyst coverage. Today, one can order a system directly from the company's B.C. plant and find it on the investment community's radar screen.

Jonathan Hykawy, alternative-energy analyst with Research Capital Corp. in Toronto has a "buy" recommendation on the stock with a 12-month target price of \$1.40 based on projected sales of roughly \$22 million and a six-times enterprise-value-to-sales ratio.

"At this point, the technology is strong and proven," he says. "Given that the company has consolidated intellectual property from both Pinnacle in Australia and Sumitomo in Japan, there are battery units that have been running for years in the market and have shown all signs of being viable for 15 to 20 years."

## Management solid

Mr. Hykawy also has confidence in the company's management team: "Their operations head, Gary Lepp, is formerly from Ballard, and knows how to go from zero to commercial produc-

tion. The CEO, Tim Hennessy, is ex-Eskom and knows the utilities and power-quality fields as well as it's possible to know them. And their president, Vince Sorace, has been instrumental in negotiating some very touchy agreements with a number of players, including Pinnacle and Sumitomo.

VRB's recent Letter of Intent with Tapbury, a wind-farm developer in Ireland, is a significant milestone for both the company and the alternative-energy market in Ireland and Europe. Tapbury purchased a \$6.3 million battery to back up a wind-farm expansion project, which is currently being studied by Sustainable Energy Ireland to determine the economic viability of storing wind power.

"The SEI tests will put a further stamp on the assumptions that went into the Tapbury off-take agreement, and hopefully eliminate the need to have each and every wind-farm developer separately convince its local utility that the inclusion of battery changes the economics of the wind-farm project."

Mr. Hykawy sees a change in the thought process applied to electrical power: "In the past, when there was a danger of running out of power during peak periods, the one and only solution was to build more generating capacity, even though the problem only existed for a few hours a day. Now, many entities, including those using alternatives, are acknowledging that battery storage is necessary."

That acknowledgement is validated by many new contracts for VRB, many of which are outside of Canada. It's still early stages for the company, and the stock price has not moved much over the past two years. Yet, I'd keep an eye on this one, as it could be on the cusp of becoming a major mover and shaker.

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