

THE RECORD **SMALL BUSINESS**

TSX -43.54 ↓ 13,087.38	DOW +133.40 ↑ 12,373.41	NASDAQ -0.02 ↓ 2,320.04	DOLLAR +0.05¢ ↑ 99.90¢ US	OIL -\$0.81 US ↓ \$92.78 US	GOLD -\$15.50 US ↓ \$907.40 US
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SECTION F

Looking out for wildlife

Waterloo firm's biology experts help limit harm to wild animals caused by man

By MATT WALCOFF
RECORD STAFF

Given its reputation for environmental innovation, it's not surprising California was the site of North America's first commercial wind farm, built in 1981.

And given how often good intentions lead to unintended consequences, it's also not surprising the project was in one way an ecological disaster.

The company behind the project logically put turbines in the Altamont Pass, one of the windiest places in Northern California.

Unfortunately, the Altamont Pass isn't only known for its winds; it's also an important habitat for birds of prey, including golden eagles, falcons and burrowing owls. And soon after the wind farm went online, carcasses of birds that flew into turbine blades began to litter the ground.

The wind-power industry has come a long way since then. Today's wind turbines are quieter and more reliable.

And thanks to Natural Resource Solutions Inc. of Waterloo, the turbines — at least those in Canada — don't thwack nearly as many flying creatures.

Founded in 1998 to do environmental assessments of developments and public infrastructure projects, NRSI's staff members have in recent years established a reputation as the go-to people for wind projects.

The firm provides essential services at all phases of a wind farm endeavour.

It surveys the plants and animals at a proposed wind farm location. It monitors the flight patterns of birds and bats at the site. It compiles information on flora and fauna with available data on weather, geology, human settlement and political boundaries. Then it uses a computer program to find potential turbine sites that won't degrade the environment.

After the turbines go up, NRSI also monitors the impact.

"Basically, you set out a sample site or a turbine, and you walk it," says David Stephenson, NRSI's senior biologist and co-founder. "You collect carcasses as you go."

NRSI got involved in the exponentially growing wind-energy industry in 2002 when Superior Wind Energy Inc. began planning Canada's largest wind project, the Prince Wind Farm near Sault Ste. Marie.

Founded by four biologists from Ecologistics Ltd., NRSI had already made a name for itself doing environmental as-



NRSI co-founders (from left) David Stephenson, Elaine Gosnell and Robert Steele join Nathan Badger, the firm's geographic information systems co-ordinator. The Waterloo firm was started in 1998 and now has 26 employees, all of whom have a background in biology.

NRSI
NATURAL RESOURCE SOLUTIONS INC.
Founded: 1998
Address: 50 Westmount Rd. N., Unit 230, Waterloo
Employees: 26
Web: www.nrsi.on.ca

essments for projects including RIM Park in Waterloo, the Hanlon Creek Business Park in Guelph and hydroelectric projects in northern Ontario.

Wind projects created some challenges for NRSI.

It's not just bird mortality; the noise, for example, can annoy neighbours and disturb the mating practices of grouse.

But it's concerns about avian death, not avian sex, that have proven to be the biggest pickle.

"Mankind has been studying bird migrations for centuries," Stephenson says. "When the wind industry really started going, they were burdened with solving a problem we'd been dealing with for centuries."

Because some flying animals are nocturnal, plotting their movements is not as simple as watching them with binoculars.

NRSI has had success using marine radar systems installed in vehicles, even though radar is usually designed to filter out birds and bats rather than track them, Stephenson says.

Field workers also use high-tech acoustic equipment to capture bat sounds at night.

But even the most state-of-the-art electronics can prove no match for the rough outdoors. On one occasion, field workers left the acoustic equipment out overnight, only to find the next morning that the wires had been eaten by a coyote.

Like other wind energy proponents, Stephenson says the industry has learned from the mistakes of the early days.

Today's turbines are located away from typical bird flight paths, thanks to services provided by firms such as NRSI. They are also several times taller and spin far more slowly than the death traps that were built in Altamont Pass.

NRSI says that for every bird that now dies at a wind turbine,



NRSI biologist Phil Anderson helps carry out a sport fish contaminant monitoring program near Wawa, Ont.

about 3,500 are eaten by cats, 2,800 are smashed by cars and 150 collide fatally with cell-phone towers.

"If you have windows on your house, and you drove here and you are on a cellphone, you've probably killed more birds than a wind turbine is responsible for in a year," Stephenson says.

Since its introduction to wind energy with the Prince Wind Farm, NRSI has worked on the Kingsbridge Wind Power Project outside Goderich, the proposed Grand Valley Wind Farm and the proposed Blue Highlands Energy Project outside Collingwood.

The company has participated in some shape or form in about 60 Canadian wind-energy projects, Stephenson says. Most of the field work has taken place in Ontario, but projects from British Columbia to Newfoundland have relied on the company's computer services.

Although wind farms now make up most of NRSI's business, the company has continued to take on other work.

It helped Waterloo Region pick the best route for the Can-Am Parkway in Cambridge and ensured that the north extension of Westmount Road in Waterloo didn't interfere with animal transportation paths.

NRSI continues to work on RIM Park, its first major project. Staff members monitor plants, amphibians, reptiles and white-tailed deer in the area. They track deer by looking for deer beds and munched-

on plants. Field workers also conduct "scat searches," that is, counting poop.

It may not sound like inviting work, but there are plenty of people willing to do it. NRSI's staff has grown steadily to 26 from about seven people four years ago, Stephenson says.

Three employees work at a Sault Ste. Marie office.

All staff members, including the administrative assistant, have a background in biology.

Stephenson's own specialty is vegetation. NRSI also has a snake person, a turtle person, a butterfly person and specialists in fish and snails.

Thirty years ago, large, iconic animals like wolves and bald eagles dominated environmental consideration. But environmental awareness today has progressed to the point where concern over even tiny creatures can put up roadblocks to major development projects.

For example, looking for Jefferson salamanders is a growth business for NRSI, Stephenson says.

The presence of the pencil-length amphibians has delayed the construction of four subdivisions in south Kitchener and a proposed expansion of River Road near Highway 8.

Even if a given species might not be endangered, it might play a crucial role in a food chain that includes another animal of great concern, Stephenson says.

"We protect and maintain diversity, which is all species," he says. mwalcoff@therecord.com

LOCAL SCENE

Meat plant signs signal change of ownership

Maple Leaf Foods has changed the signs outside its Schneider Foods meat processing plant on Courtland Avenue in Kitchener, giving more prominence to the Maple Leaf name.

The new signs don't mean Maple Leaf plans to downplay the Schneider's brand, said Jeanette Jones, Maple Leaf's director of communications.

"The Schneiders and Maple Leaf brands occupy relatively distinct and complementary positions in the marketplace and we will enhance the respective brand positions through continued investment and product innovation," Jones said.

Maple Leaf bought Schneider in 2004. The Schneider Foods name officially changed to Maple Leaf Consumer Foods two years ago. Stationery and other materials already reflect the change. The new signs, which went up last month, feature the name Maple Leaf with a smaller Schneider logo below.

Colt Canada receives \$2.9M in contracts

Colt Canada Inc. of Kitchener received four contracts worth a total of \$2.9 million from the Department of National Defence in the fourth quarter of 2007, the federal government department recently disclosed.

Three of the contracts were for guns and the fourth for "miscellaneous weapons." Colt produces the workhorse C7 series of assault rifles for the Canadian military, as well as other weapons and accessories.

The military also awarded a \$214,120 contract to Ontario Glove Manufacturing Co. Ltd. of Kitchener for special purpose clothing.

Health initiative wins kudos for Cambridge

The City of Cambridge's economic development department has won an award for product development from the Economic Developers Council of Ontario.

The department won praise for its role in developing Cambridge Health Link, a health-care clinic that opened on Conestoga Boulevard last year.

The clinic was launched, in part, to help attract more family doctors to Cambridge. The city gave the clinic \$250,000 for capital costs, plus a loan guarantee of \$300,000.

Price of new homes rose 1 per cent in 2007

The builder selling price for new homes rose one per cent on average in the Kitchener census metropolitan area last year.

That was the second-lowest increase among Canada's 21 largest urban areas, according to Statistics Canada. The Ottawa-Gatineau area had the lowest increase at 0.6 per cent.

The new housing price index for Kitchener finished the year at 139.5. That means a house that sold for \$100,000 in 1997 would have sold for \$139,500 at the end of last year.

Saskatoon recorded the biggest jump in new home prices last year — 45.1 per cent.

TurboSonic lands \$1-million order

TurboSonic Technologies has picked up a \$1-million order to design air pollution control equipment for a company in the oil and gas industry.

The equipment, called a wet electrostatic precipitator, will remove sulphuric acid mist from exhaust streams at the end user's facilities.

TurboSonic, headquartered in Waterloo, said the equipment will be shipped this summer. It did not identify the customer.

Setting prices is as much art as it is mathematics

One of the most frequent questions I receive from small business owners is this: How do I figure out what to charge customers?

It's a topic that's often not addressed in accounting and marketing books, in part because product and service pricing spans both accounting and marketing disciplines and in part because pricing is as much art as it is mathematics.

The price you set for your product or service determines your business's profitability. The profit is simply what's left over after all of your costs are



ANGIE MOHR

covered. So, for example, if you buy gizmos for \$1 and sell them for \$2.50, your gross profit on each gizmo is \$1.50.

To get to your net profit, which is your true bottom line, you would also subtract all of your other operating expenses, such as advertising, rent, and office supplies.

If you set a higher price for

your gizmos, you will make more profit on each unit sold. The question to ask is whether you will sell as many at a higher price and the answer depends mainly on the type of product or service.

The price you set for your product or service is also tied to your marketing philosophy and where you are trying to position your company in the competitive arena.

If your marketing strategy involves being the lowest-cost provider, then your price will reflect that (as well as lower margins).

If you want your company to be the "Cadillac" compared to its competition, then you may choose to set a premium price for your goods or services to convey the perception of quality to the customer.

This leads us to the three pricing "philosophies." Ultimately, the price you set for your products and services will use not just one method, but a blend of all three (with a dollop of personal judgment on top).

COST-PLUS PRICING

This pricing method looks inward at the company's costs

for the product or service and bases the selling price on the cost to set a certain level of profit.

For example, if you want a 25 per cent gross profit in your business, you would start by determining the costs of buying or producing your product or the cost of providing your service. You would then "mark up" the cost by 25 per cent to get to the selling price.

If your cost was \$1, you would mark it up by 25 per cent to \$1.25. This gives you the desired margin.

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The Right People. Right Here.

John Doherty - Chair, CTT Inc

Gowlings congratulates John Doherty on his appointment as the Chair of Canada's Technology Triangle Inc (CTT Inc). CTT Inc is the public-private economic development partnership for Waterloo Region. This appointment continues to expand Gowlings' tradition of community service and leadership. John's many community leadership roles include former Chair of the Greater Kitchener-Waterloo Chamber of Commerce.

John is Managing Partner of the Waterloo Region office of Gowlings. He practises in the area of municipal and commercial litigation. As Chair of CTT Inc he will lead the volunteer board of directors to fulfill CTT Inc's vision of promoting Waterloo Region to the world as a leading location for investment and innovation.



The Power of Original Thought
gowlings.com/waterloo



Canada's Technology Triangle
Waterloo Region
Cambridge
Kitchener
Waterloo