

CITY STYLES

GOING GREEN

Look
on the
bright side
this fall

SOLAR PRODUCTS
FOR YOUR HOME

CURLY-CUE CFLS ARE
JUST THE BEGINNING

PLUS
AN INTERVIEW WITH ASTRONAUT
DR. ROBERTA BONDAR

What size is your environmental footprint?



There's something invigorating about fall.

The light is less intense. The colours are brighter. The air is cooler. The night breezes make for restful sleeping.

The very things Canadians enjoy most about fall – the light, the air – are also the elements that have been harnessed for centuries as sources of renewable energy. Today, solar energy and wind power are fast becoming more cost effective alternatives to energy produced from fossil-burning electricity plants.

This issue of *City Styles/Going Green* focuses on solar power. Anyone who has ever held a magnifying glass to a piece of paper on a bright sunny day knows the sun's power. Nature harnesses the sun to produce oxygen through photosynthesis in plants. Sailors can capture sunlight with on-board solar panels to power their engines and radio equipment. Car manufacturers are testing their use in plug-in hybrid vehicles. Physicists are even experimenting with solar sails to propel spacecraft into outer space.

Locally, solar power's momentum is also growing. One retailer that is leading the way in our community is The Home Depot. In June, the store located at Highways 7 and 400 installed a 20-kilowatt array of solar panels on the roof of its Garden Centre. PowerStream partnered on that project and is also installing solar and wind power demonstration projects at its new corporate headquarters in Vaughan. The targeted LEED® gold-rated building will have nine solar photovoltaic towers capable of producing 15 kilowatts of electricity, in addition to an on-site single 1.8 kilowatt Skystream wind turbine.

Of course, the pioneer in terms of renewable energy education is right in our very own backyard – at The Kortright Centre on Pine Valley Road in Vaughan – where both wind and solar technologies have been part of the landscape since 1979.

Notwithstanding the benefits of renewable energy, I like to remind people that conserving energy is by far the most effective – and affordable – way to decrease their environmental footprint. Every conscious effort you make to use less energy helps us all. So, enjoy the light, the air and the colours of fall. And do what you can to tread lightly, environmentally-speaking.

–Eric Fagen, PowerStream

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New energy conservation programs off to a

winning start

JOHN SHERIN, COORDINATOR,
CONSERVATION PROGRAMS

There's a simple strategy behind the three new province-wide energy conservation programs that were launched last summer.

Give people the tools to save on their electricity bills and they'll see that it pays to get with the program.

To the extent that results can be measured at this early date, it's safe to say that homeowners strongly support the **Great Refrigerator Roundup**, **Summer Savings** and **peaksaver™** programs.

"The Great Refrigerator Roundup program certainly gives people a powerful incentive to get rid of their old fridges," said Bill Wylie, Manager, Program Delivery, Mass Market Programs, Ontario Power Authority. "If 12 people remove one energy-guzzling fridge each, the resulting energy savings

are enough to power one home for a year. Replacing an old fridge with a more energy efficient Energy Star® model can save up to \$150 per year in electricity costs."

Based on the success of the **peaksaver** pilot program in its service territory, PowerStream announced in July that the program would be expanded to allow for participation by a further 4,000 customers.

Here's how the program works:

- To register for **peaksaver**, call 1-866-323-0206. You will receive a \$25 incentive for signing up.

- A Honeywell contractor will make an appointment to come to your home and install a free programmable thermostat (valued at \$250).
- The thermostat will allow you to program

the temperature up or down (manually or via the Internet), depending on when you're home or away. That way, you only pay for

the electricity you use. In summer, during times of extremely high electricity use, the thermostat can be adjusted remotely by PowerStream to cycle down your central air conditioning by one or two degrees, for a brief period, to help ease the strain on the province's electricity grid and avoid potential brownouts.

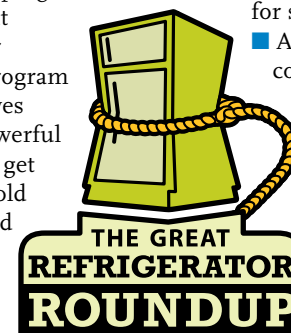
According to Peter Love, Chief Energy Conservation Officer, Ontario Power Authority: "Switching to a programmable thermostat is the first step in running a more energy efficient home."

It's still early days for the results of the Summer Savings program. All PowerStream residents were automatically enrolled in the Summer Savings program in July. Stay tuned and look for any credit that you may have earned on your fall electricity bill.

For more information about these multi-year programs, or for tips on how to save energy, reduce your electricity bill and protect the environment, visit www.powerstream.ca.

PHOTO BY TOM HASIAK

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Is solar technology the right choice for your home or cottage?

Let the **SUN** shine

BY ALEX WATERS, KORTRIGHT CENTRE

As the number of solar products on the market continues to grow, I get a lot of questions in my workshops about which products are best.

What are the different solar technologies on the market today?

There are two major types of solar technology on the market today: solar heating (also called solar thermal) and photovoltaic technologies.

Passive solar heating is extremely cost effective and can reduce your home heating/cooling costs by 40 per cent. Passive solar heating comes from orienting your house or cottage in a way that maximizes its ability to retain the sun's heat during the winter months, and reduce heat in summer. Using blinds, shades or Energy Star® windows can help. So can planting deciduous trees on the south side of your property to create shade in summer. Passive solar is usually most effective when it is designed and built into a new home.

Active solar heating systems use simple dark coloured collectors to convert the sun's heat, light and ultraviolet energy into heat that can be used for your home's hot water tank or swimming pool. Solar heating collectors look either like flat plates (glazed and unglazed) or evacuated tubes.

Photovoltaic panels are reliable, silent and environmentally friendly. They require no maintenance, won't break (unless they're dropped) and will produce electricity for up to 40 years. Since 20 per cent of a home's energy use is for electrical appliances, photovoltaic systems can supply all or part of this electricity. However, due to their expense, it is not cost effective to use photovoltaic panels to heat water or your house.

Should I buy a solar heating system for my swimming pool?

Swimming pools are a perfect application for solar collectors and are the most cost effective solar technology to operate and install. A solar heating system for your pool can pay for itself in one to three years. It can replace your current pool heating system entirely, thereby saving you money, extending the swimming season and allowing you to do your part for the environment.

I've heard that water heaters are the second costliest item to run in a home? Are there any alternatives?

Yes, first install low flow shower heads, aerators, take shorter showers and install a hot water tank insulating blanket. Then, you may want to consider a solar water heater, which can reduce your energy costs

by 40 to 50 per cent. Most solar water heaters can easily be retrofitted to your existing water heater.

I'm thinking of having photovoltaic panels installed at my cottage. Is this a good idea?

If your cottage is in a remote location and is not hooked up to the electricity grid, this might be a good idea. In a remote location, connecting to the grid can be very expensive; and photovoltaic panels can be a more cost-effective option.

But remember: photovoltaic systems only produce electricity during the day, which means you will also have to install (and charge) batteries to carry the home at night or on sunless days.

If you have a residence that is already on the grid, photovoltaic panels can help to reduce your reliance on the grid through a process called 'net metering'. Net metering feeds generated electricity into the house; any excess electricity runs back through the hydro meter, giving you a credit for the electricity you produced. Another option is the Province of Ontario's 'Renewable Energy Standard

Offer' (see www.energy.gov.on.ca for more information). Although these programs make photovoltaics more accessible, the pay-back period can be 15 to 20 years. However, if you are committed to green energy, once connected, photovoltaics are the most user friendly and reliable solar choice.

For more information about solar energy, visit Kortright Centre (www.trca.on.ca) or call 905 832-2289. For a list of retailers and installers, contact the Canadian Solar Industries Association or the Solar Energy Society of Canada.



Small changes can add up to **big** rewards

VIIVE SAWLER, MARKHAM ENERGY CONSERVATION OFFICE

Take a walk down the light bulb aisle in your local hardware store

and chances are you'll find a dazzling array of lighting options including compact fluorescent, halogen and light emitting diode lights. Before making your purchase, here are some facts worth considering.

Compact fluorescent lights (CFLs). Most people are familiar with the curly-cue type of compact fluorescent light. But according to Laura Fuller, Manager, Communications and Marketing Services, Osram Sylvania, there are as many styles of CFLs as there are decorating needs. "To get the most from your CFLs, place them in the rooms where they'll be used the most, such as the family room, living room and kitchen. Because they use 75 per cent less energy than incandescent lights and generate 70 per cent less heat, CFLs are an easy way to decrease your energy costs. Simply by replacing one 60-watt incandescent bulb with a 13-watt CFL, you can save almost \$40 in energy costs over the life of the bulb. Plus, you won't have to change the CFL for approximately seven years."

When disposing of your CFLs, check with your municipality's recycling guidelines. Some municipalities, such as the Town of Markham, have recycling depots that will

accept CFLs and are equipped to dispose of the glass and mercury in an environmentally responsible way.

Halogen lights. Halogen lights are incandescent bulbs that contain a gas mixture called 'halogen', which is used inside the lamp to minimize filament wear. Depending on where they're used, halogen lights can be more energy efficient than traditional incandescent bulbs. For instance, you can replace a 120-watt incandescent flood light with a 90-watt halogen bulb that yields more lumens but uses 25 per cent less energy.

Light emitting diodes (LEDs). LEDs were introduced in the 1960s, but the high cost limited their use to isolated applications such as 'on/off' indicators on home and office appliances. More recently, the use of LEDs has expanded to traffic signals, vehicle brake lights, exit signs and outdoor festive lights.

LEDs emit cool light and offer 90 per cent efficiency, meaning they are an ideal choice for minimizing your household's energy consumption. However, manufacturers are still working on developing LEDs for broad in-home use that will produce enough light. But stand by, because when they do Natural Resources Canada's Office of Energy Efficiency predicts LEDs will "revolutionize how we light to see" and "how we see lighting".



PHOTOS COURTESY OF OSRAM SYLVANIA LTD.

Put the **chill** on winter with these home comfort tips

PATRICK GURAN, CHIEF ENERGY CONSERVATION OFFICER

As the temperature starts to dip, it makes sense to start thinking about winterizing your home to get the most from your energy dollar.

Here are a few tips. Do them all, or select just a few. It can add up to a cozier home, a lower electricity bill and less greenhouse gas emissions.

Get the most from your radiators. By installing radiator foils to the wall behind each unit, heat is deflected back into the room. Foils are inexpensive and can be purchased at most hardware stores.

Use child-proof plugs in electrical sockets. These inexpensive caps help to cut down on heat loss.

Insulate, insulate, insulate. Ten to twelve inches of adequate, evenly laid insulation in the attic meets current Building Code standards. Foam insulation may be easier to apply around wall sockets, windows, vents and other hard to reach places.

Keep it moving. Avoid blocking heating vents with furniture or window coverings to keep warm air circulating throughout your home.

Shift into reverse. If your home has ceiling fans, you'll want to run them in reverse in winter. That way, the warm air that's pulled up towards the blades will be circulated back down to the living areas of a room.

Is it sealed? Replacing cracked or flattened weatherstripping will keep cool air out and warm air in all winter.

Does your furnace measure up? It's important to have your furnace inspected regularly. Keeping furnace filters and floor/wall vents clean will help the fan that circulates warm air throughout your home to run more efficiently. Electric furnace fans in forced air heating systems use about 13 per cent of a home's electricity usage. It is recommended that furnace filters be changed every two months, or sooner if you have pets.

The magic number is 18. When you're away, set the temperature on your programmable thermostat to 18 degrees Celsius. Program

the system to warm the house shortly before you return. While you're at home, an efficient thermostat setting is 20 to 21 degrees Celsius.

Lighten up. Open your window coverings during the day and allow the sun to warm your house. At night, pull them closed to trap warmer air inside.

Do the math. If you're replacing your furnace, consider the amount of insulation and sealing that you have in your attic and walls. This may reduce the size of furnace you need. Choosing the right size furnace will be more effective than buying one that's too big for your size of house – and you'll save money with a smaller unit.

Use your plastic. Adding a thin layer of plastic film over single-pane windows can reduce heat loss by 25 to 50 per cent. Look for it at your local hardware store; and apply it with a hairdryer.

For more information about improving the energy efficiency of your home and about energy audits, call GreenSaver, a non-profit organization dedicated to environmental energy efficiency (416 203-3106).

Looking at the world as an explorer of the surface

ERIKA MIETO,
POWERSTREAM



In 1992, aboard the space shuttle Discovery, Dr. Roberta Bondar became the world's first astronaut-neurologist.

In 2003, *Time Magazine* named her one of North America's Best Explorers. Holder of the NASA Space Medal and inducted into the International Women's Forum Hall of Fame, and to the Canadian Medical Hall of Fame for her groundbreaking research in space medicine, she has received 24 honorary doctorates from Canadian and American universities.

City Styles/Going Green spoke to Dr. Bondar, who in 2007 chaired the Ministry of Education's Curriculum Council on the environment and education, for her thoughts on environmental education.

What did you like best about being an astronaut?

I think what you're asking is: What is it like to see the Earth as an astronaut? The short answer is: fantastic. We can simulate the experience of space on Earth, for very short periods, but to actually see the Earth from a distance is obviously completely different. You need to get off the planet in order to really see it. But 'seeing' means many things; and it means different things to different people. I saw the Earth within the context of everything that surrounds it – the blackness, the lack of twinkling stars. But I also saw it

in a more poetic light – as a swirling mass of soft pastel colours, as a moving configuration of land and water, with completely different dimensions than if I were standing up close to any one part of it.

What do you do now?

I am fortunate to be able to pursue three ongoing passions: education, photography and writing. My experience as an astronaut-neurologist has given me a unique perspective on the environment and about adapting to new situations. I use this perspective to educate, to entertain and to encourage people from all walks of life to learn more about themselves and about the environment.

From your vantage point, what is the most important thing parents can teach their children about the environment?

There are many ways to answer that question. If I had to pick, I'd say the first thing is to demonstrate ongoing curiosity about the world around you. If you're walking the talk, your children will take their cue from you. Talk to your children about the environment, about what they're learning at school. Show them that you're as interested in learning as you hope they will be.

I also think it's important to teach your children how to separate the wheat from the chaff. By that I mean, there is a lot of bad

science out there, science that is based on activism and emotion, which I believe does a disservice. Activism is not education. If you don't understand the basics about conservation or global warming yourself, then you won't be able to play a guiding role for your children. There are great government websites with lots of information and various links. There are also wonderful new school programs like EcoSchools that can point you in the right direction. Listen to what your children are learning at school, upgrade your knowledge as they do, and be ready to support your school's environmental curriculum in whichever way you can.

Lastly, I would say that parents should help their children to become environmentally literate and encourage them to continue learning. There are basic facts that everyone needs to know, and from there you can assess what corrective action you want to take, whether it's conserving energy, limiting the use of chemicals or reducing car exhaust. Before you change your environmental behaviour, you need to understand the concepts. And as the science changes, you need to adapt as well. Learning is an ongoing pursuit.

What changes need to occur in order to save the planet from further environmental degradation?

There is a certain truth to the conventional wisdom of 'acting locally'. Clearly, if we're poor custodians of our own community, we have no hope of tackling environmental problems on a grander scale. There are hundreds of local communities doing the right thing. Sew them all together, and you get the fabric of the world.

What's disturbing about some of the environmental activism I hear is that it implies there is a quick fix to the world's problems. This misrepresents the reality. In some parts of the world, environmental issues are intimately related to social problems such as poverty and AIDS, and to claim there is one solution is just not factual. The world is not black and white; there are lots of shades of grey and endless complexity. That's why acting locally is a promising first step.

1 ever so easy lasagna

BY BARB HOLLAND, PHEC

No need to cook noodles. Use regular lasagna noodles and line your dish with parchment paper for the easiest clean-up ever (just say no to scrubbing dishes). This is so easy, the kids can make it.



Ever So Easy Lasagna

1	19 oz (540 mL) can stewed or pasta tomatoes*	1
1 cup	pasta or spaghetti sauce	250 mL
6	uncooked lasagna noodles	6
1	500 g container ricotta cheese	1
1 cup	shredded mozzarella cheese	250 mL
¼ cup	freshly grated Parmesan cheese	50 mL

■ Combine tomatoes and sauce; spread one-third of mixture in 11 x 7 x 2 inch microwaveable dish.

■ Arrange 3 noodles over the sauce. Spread noodles with half the ricotta cheese. Top with another third of sauce. Repeat with remaining 3 noodles, remaining ricotta and sauce.

■ Cover with plastic wrap, turning back one edge to vent. Microwave at High 10 minutes, rotate dish, and reduce to Medium (50%) and cook for 10 minutes or until noodles are tender when pierced with a knife.

■ Sprinkle with cheese, recover and let stand 10 minutes (this helps the noodles absorb liquid).
Makes 6 servings.

* If using whole tomatoes, chop. An easy way to chop them is with your kitchen scissors — right in the can.

tip: If you have leftover lasagna, freeze a serving in a microwave container. Take frozen to the office, by lunchtime it will need just a quick reheat.

The author is a professional home economist and food writer. She is the co-author of Microwave Cooking with Style and author of Milk's Microwave Cookbook.

Fall & winter fun is just around the corner

The kids may be back to school, but that's no reason not to plan some great family fun on weekends throughout the fall and into the winter months. Here's what's going on in your neighbourhood and in other communities close by. Mark your calendar now, and get ready for fun and frolic.

SEPTEMBER 15

Thornhill Festival

Highlighting the heritage of Old Thornhill Village and providing a venue for community groups and citizens to get together to celebrate with arts and crafts, activities for all ages, great food and entertainment. Location: Yonge and Centre Streets, Thornhill.

SEPTEMBER 22-23

Green Energy Home Show

The largest exhibition of energy conservation workshops, tours and demonstrations in Canada held annually at Kortright at the Living City Campus in Vaughan. The show is sponsored by PowerStream, Toronto and Region Conservation, Al Palladini's Pine Tree Ford Lincoln and Windfall Ecology Centre.

SEPTEMBER 27-30

Markham Fair

Come visit the PowerStream sponsored 'SafetyLand' area at one of Canada's oldest country fairs. Since 1844, the Markham Fair has provided the community with a showcase for talents and products in a friendly competitive spirit. Location: 10801 McCowan Road, Markham Fairground.

OCTOBER 6-8

Woodbridge Fall Fair

A celebration of yesterday, today and tomorrow where attendees participate and experience the charm of a 160 year old fall fair within the Heart of the Historic Village of Woodbridge. Location: Fairgrounds, Kipling Avenue, north of Highway 7.

OCTOBER 16, 7PM

Energy Conservation Workshop

Join PowerStream at the Aurora Library Energy Conservation Workshop. Call Adult Information Desk to register at 905 727-9493, select option 4. Check www.powerstream.ca for other energy conservation workshops.

NOVEMBER 18, 1:30PM

Richmond Hill Santa Claus Parade

The Town of Richmond Hill presents the 2007 Richmond Hill Santa Claus Parade, which begins at the intersection of Yonge Street and Industrial Road, heads south on Yonge Street and finishes at Hillcrest.

NOVEMBER 24, 10AM

Markham Santa Claus Parade

This long-standing Markham tradition continues, with more than 100 floats and bands. The annual Santa Claus Parade, organized by the Markham Sunrise Rotary Club, heads south on Main Street in Markham and continues west on Highway 7 to McCowan Road.

NOVEMBER 24, 6-8PM

Aurora 'Under the Stars' Santa Claus Parade

Throw on your winter woolies and join us for an evening parade as Santa comes to the Town of Aurora. Location: Yonge St. between Orchard Park Blvd and Murray Drive.



NOVEMBER 25

Maple SantaFest Parade

The mission of SantaFest is to promote community spirit, civic pride and foster partnerships between businesses and the community in the celebration of the Christmas Holiday season. Location: Maple Community Centre at Canada's Wonderland.

FEBRUARY 1-3, 2008

Richmond Hill Winter Carnival

The Richmond Hill Winter Carnival is a weekend of affordable fun and entertainment organized by volunteers to celebrate the community of Richmond Hill in a welcoming atmosphere. Location: Mill Pond.

FEBRUARY 10, 2008

Vaughan Winterfest

The City of Vaughan's 19th annual Winterfest event featuring live entertainment, games, rides, and a whole winterland of fun. Location: Lower Village Community Centre, Weston Road.

peak saver™

JUST GOT BETTER!

When PowerStream customers sign up for **peaksaver™** conservation program, they get a free programmable thermostat (valued at \$250), a \$25 thank you AND the chance to win!

YOU COULD

WIN



Bionix Electric Bicycle
with Accessories



Gardina Cordless
Electric Lawn Mower



TRCA Family
Membership

peaksaver™ is a conservation program that allows PowerStream to cycle down participating customers' air conditioning systems temporarily during peak summer demand times (never on weekends or holidays). Customers involved in **peaksaver™** hardly notice a change in temperature and are part of a program which helps the environment.

To sign up for **peaksaver™**, call 1-866-323-0206.
For more information and contest rules,
please visit our website at
www.powerstream.ca/peaksaver.

OPA
Ontario Power Authority

Power
Stream
Your energy connection

