

# APARTMENT LIVING IS GREEN







# OVERVIEW

## **APARTMENTS ARE GREENER THAN SINGLE FAMILY HOMES**

**65%** *less energy use per household*

**40%** *less water per capita*

**60%** *less waste*

**10 km** *shorter commute distance to work*

## **RENTERS ARE GREENER THAN OWNERS**

**50%** *less energy used per household*

**8.4 km** *shorter commute each day*

**32%** *less likely to use a car*

**150%** *more likely to take transit*

**175%** *more likely to walk*

## **MORE CAN BE DONE FOR THE ENVIRONMENT WITH THE RIGHT GOVERNMENT POLICIES**

- *Remove planning barriers to density*
- *Remove tax barriers to rental housing development*
- *Remove legislative barriers to submetering*
- *Remove program biases against rental housing*

# ENVIRONMENT AFFECTED BY HOUSING CHOICES

**T**here is a growing awareness in society about the impacts of our choices on the environment. We all want to do our part to ensure a cleaner environment today, and in the future. We recycle, we look for cars with lower fuel consumption, we use less water, and we buy more efficient appliances.

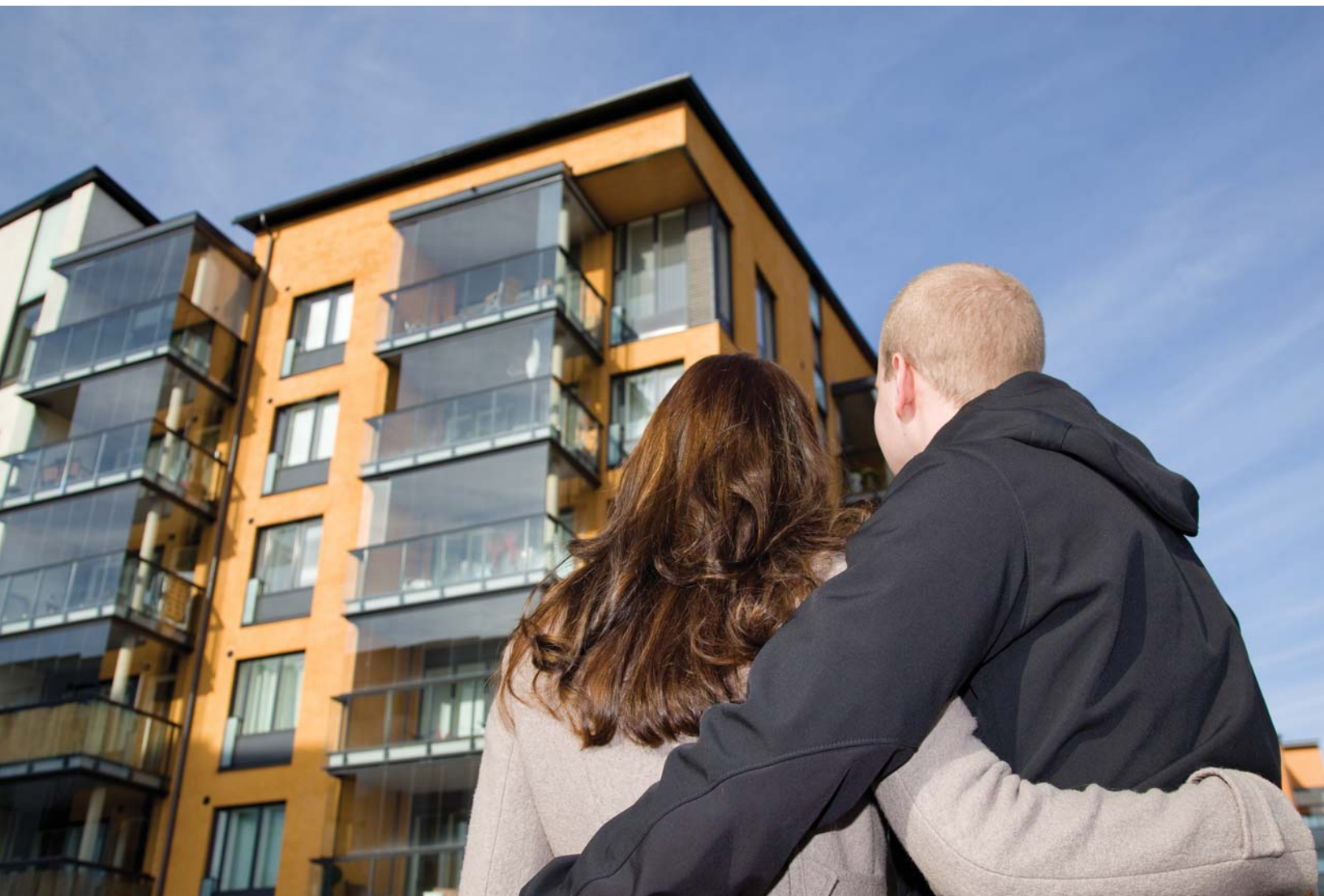
We don't always consider how our housing choices affect the envi-

ronment. If we live far from where we work, there are significant energy consumption implications for commuting. If we live in a larger home, we consume more energy every day to heat it, cool it, maintain it and furnish it. It turns out, our choices matter.

Renting and multi-residential living is the green choice. In this brochure, we examine the differences in environmental impact in

Ontario, on average, between owning and renting, and between higher density living and single-detached living.

As you will see, choosing to rent results in a smaller environmental footprint, and consumes less land and materials per housing unit. This is an additional benefit to the typically lower cost and convenience offered by multi-residential living.







# RENTERS USE LESS ENERGY

**A**ccording to Statistics Canada, the average renter consumes half of the energy of the average homeowner. The average renter in Ontario used 62 gigajoules<sup>1</sup> per household compared to 125 gigajoules for the average homeowner.

## Higher Density Means Less Energy Consumption

When you remove tenure from the equation, those living in apartments consume much less energy than those living in single detached homes. According to Statistics Canada, the average apartment resident in Ontario (both condominium owners and apartment renters) consumed 48 gigajoules of energy, compared to 136 gigajoules for the average homeowner.

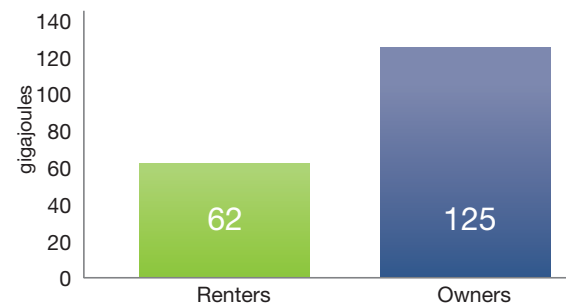
Multi-unit housing residents, which includes row housing, doubles, duplexes used about twice the energy of an apartment, but still used much less energy than single detached homes.

This will not be surprising to most readers. The typical apartment is surrounded on either side by another apartment, and one above and below. This configuration makes these dwellings much less expensive to heat and cool. Townhouses typically have a unit on either side, also reducing energy consumption when compared to a single family home, which is fully exposed on all sides.

<sup>1</sup> A gigajoule is roughly equivalent to the energy from the combustion of one-sixth of a barrel of oil.

## Renters Use Less Energy

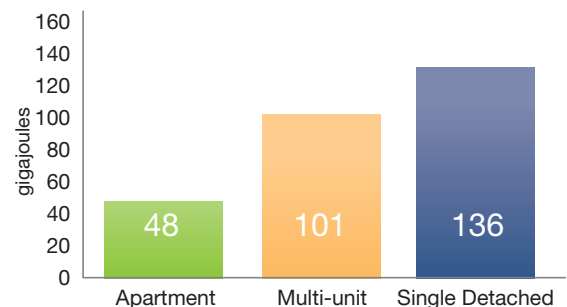
### Average Household Energy Use by Tenure, Ontario, 2007



Source: Statistics Canada, Households and the Environment Survey, Energy Use 2007, Catalogue no. 11-526-8

## Apartments Use Less Energy

### Average Household Energy Use by Dwelling Type, Ontario, 2007



Source: Statistics Canada, Households and the Environment Survey, Energy Use 2007, Catalogue no. 11-526-8

# 50percent

The average renter consumes half the energy of the average homeowner.





# APARTMENT HOUSEHOLDS USE LESS WATER

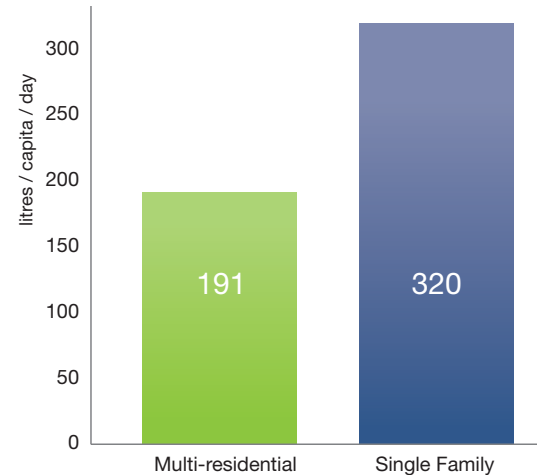
## Every Drop Counts: Higher Density Means Less Water Consumption

**W**ater conservation is an important environmental goal. Urban water-use involves the use of energy at every step: extraction, treatment, distribution, wastewater treatment, collection and end use. Energy is used to pump and treat the water and wastewater. End users consume energy by heating purifying and adding softeners. Finally, there is energy used to manufacture the chemicals used in treating the water.

In many towns in Ontario (e.g. Woodstock), the water source is groundwater. So conservation is critical for these municipalities, because drought years can create a serious shortage in the summer months.

People who live in multi-residential complexes use much less water than those in single-family homes. Data for the city of Toronto shows that single family dwellings use 67 percent more water. Multi-residential residents use 191 litres per capita per day (L/c/d) versus 320 L/c/d for single family residents. A large percentage of renters in Toronto live in multi-residential complexes. Once again, renting and higher-density living demonstrate benefits for the environment.

## Apartments Use Less Water Toronto Water Consumption Per Person by Dwelling Type



Source: Statistics Canada, Households and the Environment Survey, Energy Use 2007, Catalogue no. 11-526-8

# 67 percent

Single family dwellings use 67 percent more water than multi-residential dwellings in Toronto.







# RENTERS AND APARTMENT HOUSEHOLDS HAVE SHORTER COMMUTES

One of the benefits of renting is that it allows more mobility. This gives more flexibility to employees to live closer to their workplace.

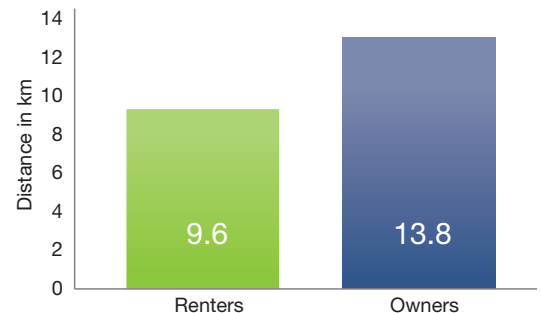
Homeowners in Ontario have an average commute distance that is 41 percent longer than that of renters. An analysis of Statistics Canada Census data shows the average renter traveled 9.6 kilometres (km) to work in 2006, compared to 13.8 km for the average homeowner. This meant 43 percent more energy use and greenhouse gas creation by homeowners. Commuting both ways, the average homeowner is travelling 8.4 km further than the average renter each day.

Denser development occurs closer to urban centres where many jobs are located, cutting down commuting distances for both owners and renters. There is also a quality of life benefit here. Shorter distances means more time for people to be more productive or enjoy more time with friends and family.

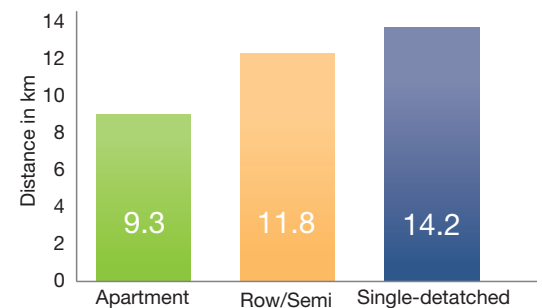
Part of this comes from the flexibility of renting. Renters have the ability to easily move closer to work locations. When we compare renters and owners living in the same type of housing, we still find that renters have shorter commutes. For example, the average renter of a row home commutes 9.6 km on average, compared to 12.8 km for owners. The average owner of a high rise home commutes 10.4 km compared to 8.8 km for a renter.

Another factor that favours renters in this area is their greater tendency to live in multi-residential complexes. People who live in high-rises commute 9.3 km on average compared to 14.2 km for those in living in single detached homes.

## Renters have Shorter Commutes Average Distance Travelled to Work by Tenure, 2006, Ontario



## Apartment Dwellers have Shorter Commutes Average Distance Travelled to Work by Building Type, 2006, Ontario



Source: FRPO based on Statistics Canada Public Use Microdata files.

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The average renter traveled 9.6 kilometres to work in 2006 compared to 13.8 km for the average homeowner.

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# RENTERS & APARTMENT HOUSEHOLDS USE GREENER TRANSPORTATION

## Renters and Multi-residential Households Use More Environmentally Friendly Transportation Methods

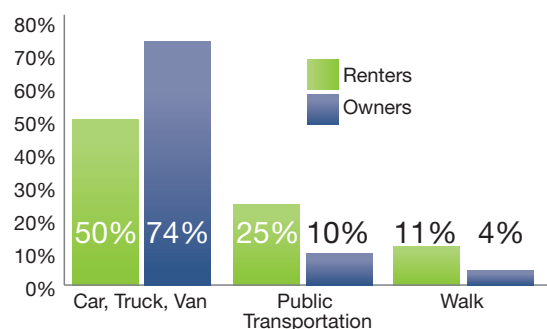
**T**he flexibility of renting makes it easier to live closer to work, and closer to public transit facilities and corridors. We saw previously that renters and multi-residential dwellers have shorter commutes. Data from Statistics Canada shows that they also are more likely to use public transit or walk to work. 50% of renters use a car to get to work compared to 74% for homeowners. In contrast, 25% of renters take public transit, compared to 10% for homeowners. Finally, the convenience of renting allows 11% of renters to walk to work, compared to 4% for homeowners. As we saw with commuting distance, these results hold even when we control for differences in dwelling choices. For example, 61 percent of low-rise condo owners use a car to get to work, compared to 46% of low-rise renters.

Data from other sources reinforce these findings. Condominium and townhouse residents average 5.6 vehicle trips per day and apartment dwellers 6.3 trips per day, compared with the 10 trips per day averaged by residents of low-density communities.<sup>2</sup>

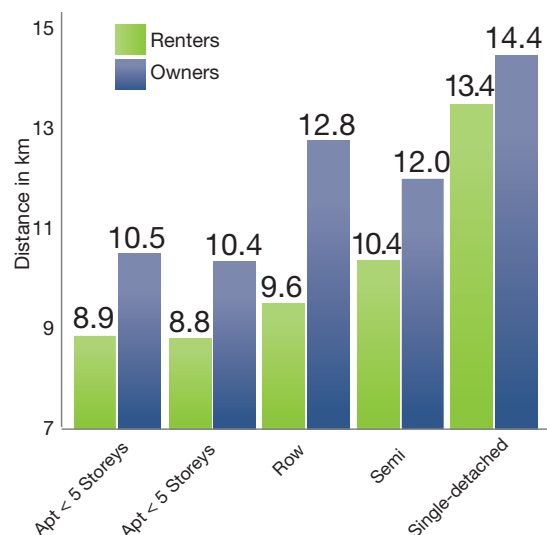
In large Ontario cities such as Toronto and Ottawa, two thirds of centrally located high rise apartment units are located within 1 km of a rapid transit station, compared to just between 7% and 18% of detached housing in the inner suburbs.<sup>3</sup> Households in centrally located high rise apartment units own only between 1.1 and 1.3 vehicles per household, compared to overall average per household vehicle ownership of 1.9 and 1.7 for those two cities respectively.<sup>4</sup>

<sup>2</sup> Institute of Traffic Engineers, Trip Generation, 6th ed., vol. 1 (Washington, D.C.: Author, 1997).  
<sup>3</sup> Statistics Canada, 2001. CanMapR Streetfiles V6.3 and the 2001 Census.  
<sup>4</sup> Statistics Canada, 2001. CanMapR Streetfiles V6.3 and the 2001 Census.

### Renters More Likely to Walk or Take Transit Mode of Transportation to Work by Tenure, 2006, Ontario



### Renters Commute Shorter Distances Average Commute Distance by Dwelling Type and Tenure, Ontario



Source: FRPO based on Statistics Canada Public Use Microdata files.

25% of renters take public transit compared to 10% for homeowners

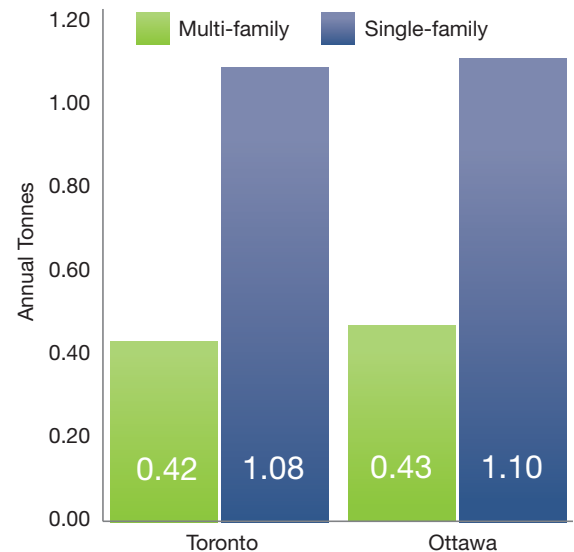
# APARTMENT HOUSEHOLDS GENERATE LESS WASTE

**M**unicipal waste collection statistics demonstrate that multi-family housing units generate much less total waste per household. Data from Ottawa and Toronto show that multi-residential complexes generate only 39 percent of the waste generated by single-family dwellings.

Some note that multi-residential complexes currently have lower rates of diversion to recycling. Part of the reason is that multi-residential households are producing less waste to begin with, so there is less recycling to divert. However, the added complications of high rise waste disposal (e.g. limited floor common areas and garbage chutes), and restrictive provincial and municipal regulations make it harder to achieve higher recycling targets in multi-residential. In the end, municipal governments pay for both waste disposal and recycling on a per tonne basis, so the lower waste generation volumes found in multi-residential rental housing are benefitting municipalities.

Another advantage of multi-residential rental housing is the ease and convenience for municipal collection vehicles (resulting in lower costs and lower greenhouse gas emissions). When collecting waste and recyclables from apartment buildings, municipal collection trucks can collect materials from hundreds of households at one stop, compared to individual pick-ups from single family dwelling unit spread out over a large geography.

## Apartment Dwellers Produce Less Waste Waste Produced Per Household, Toronto & Ottawa



Source: City of Toronto Multi-unit Residential Waste Management Initiative Update, 2008, City of Ottawa, Waste Management Plan, 2003

# 39percent

Multi-residential complexes generate only 39 percent of the waste generated by single-family dwellings.



# HOW TO IMPROVE

**R**enters and multi-residential households can take some pride in the fact that their living style results in a smaller environmental footprint. However, there is always room for improvement. The rental housing industry and the building and development industry will continue in their efforts to improve the efficiency of the existing and new housing stock. However, government has a role to play. Government policies in several areas affect the ability of industry to be more efficient both in new development and with the existing stock. Here are some things that could be done by the government to reduce building related energy consumption in the province.

## Remove Planning Barriers to Density

Clearly higher density living results in a much smaller environmental footprint. However, it continues to be a major challenge in Ontario to build more densely. Neighbourhood opposition to higher density housing in urban areas is getting stronger every year. The provincial government needs to design a system that makes it clear to municipalities that high density development will be allowed and encouraged in urban areas. In addition, municipal officials must stop catering to NIMBY forces and stop using the planning process to reduce densities and extract massive fees and charges out of developers, which further reduces development feasibility and supply.

## Remove Tax Barriers to Rental Housing Development

In Ontario we are fortunate to have a healthy housing development sector and an abundant supply of housing of all types. This includes an abundant supply of rental housing from condominiums and the secondary rental market. However, development of purpose-built rental housing is still a challenge from a financial feasibility perspective. We have seen how the flexibility of rental housing living provides environment and other benefits. The federal government has a major role to play in changing the tax rules to remove barriers

to rental housing development and promote its feasibility. And municipalities have to make their development fees and charges more progressive as they are currently a barrier to rental development.

## Remove Legislative Barriers to Submetering

About 85 percent of Ontario's high-rise rental housing stock is not individually metered for electricity – they are “bulk-metered”. This means that electricity is included in rent. This is unique to Ontario. In most of the developed world, tenants pay for their own electricity consumption. Study after study has shown that individually metered buildings consume much less electricity than bulk-metered buildings. A study done by Oakville Hydro found that when buildings were converted from bulk to individual billing, electricity consumption declined by 22%.<sup>5</sup> The experience of one larger member of FRPO who began converting their entire portfolio from bulk-metering to individual billing in 2007 is that individually billed tenant households use 39% less electricity. The current rules in Ontario regarding submetering mean that making a significant move away from bulk billing is impractical. To do so requires the consent of every tenant, making it infeasible. Massive energy savings, at no cost to the government, are available with a simple legislative change.

## Programs for Rental Housing

The rental housing sector is often ignored when it comes to government incentive programs. Home renovation programs typically exclude rental housing, or high rise rental housing.<sup>6</sup> However, there is great potential for energy conservation in the multi-residential sector. For example, a program for windows in apartments would be tremendously beneficial. The right program would allow owners to tackle this very expensive proposition which is often not feasible, creating jobs in the process and reducing energy consumption significantly.

<sup>5</sup> Navigant Consulting. Evaluation of Individual Metering and Time-of-use Pricing Pilot. Prepared for Oakville Hydro. March 18, 2008.

<sup>6</sup> For example, the 2009-10 federal Home Renovation Tax Credit program was only available to homeowners.

# CONCLUSION

In addition to the many benefits of renting or apartment living, it is also a green choice. It means consuming much less energy and water because of the more efficient design of multi-residential complexes. And the convenience of renting means shorter commuting distances, and more transportation options such as public transit, or the

healthy choice of walking. It also means a higher quality of life, living closer to work and shopping, leaving more time for productive pursuits, family time and leisure. Finally, it is more affordable. In addition to the inherent lower cost multi-residential living and renting, it will result in much lower energy costs and transportation costs.





# ABOUT FRPO

**F**RPO (the Federation of Rental-housing Providers of Ontario) is the largest association in Ontario providing services to those who own, manage, build and finance residential rental properties. Our membership includes a diverse group of owners and managers, from those with one small building or a single rental unit, up to the largest property management firms and institutional owners and managers. The association also includes our colleagues and partners in industry, including service providers, suppliers, and industry consultants. With more than 2300 members in every area of Ontario, and with over 350,000 homes, FRPO represents the full spectrum of the industry in Ontario.

FRPO promotes professionalism in the rental housing industry. FRPO members must adhere to a Code of Conduct. FRPO also provides regular edu-

cation and training to help members with all aspects of rental property ownership and management. This includes education and training on: legislative rights and responsibilities; customer service; marketing; technical building issues; energy efficiency and conservation; changing market conditions; and any practical subject of interest to owners and managers.

FRPO members also benefit from a number of additional member services. These include: free legal advice; forms and leases; technical bulletins; legal and legislative bulletins; FRPO's natural gas bulk purchase program; our bi-monthly magazine FE; and awards program; eligibility for FRPO's Certified Rental Building (CRB) Program; FRPO's appliance replacement discount program; and many other bulk purchase discounts and benefits.

## CRB Program Goes Green

**F**RPO's Certified Rental Building (CRB) program is going green in 2012. The CRB program is the only tenant-focused quality assurance program of its type in Canada and North America that helps rental-housing consumers identify well-run, well-managed apartment buildings with a strong focus on providing good quality service to their residents. Coming this fall, the program will introduce 15 new "green" Standards of Practice aimed at promoting property management practices that support environmental-friendly apartment buildings; a continuous learning environment for employees and tenants alike that supports green-living practices; and prudent consumption management of energy used to run their buildings.





for more information please contact the  
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