

Your Guide to the  
**One-Tonne**  
**CHALLENGE**



**Take action  
on climate change.**

Use less energy, save money, improve  
air quality and protect our environment.



Government  
of Canada

Gouvernement  
du Canada

Canada

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**A GOAL OF ONE TONNE PER PERSON MEANS REDUCING YOUR GHGs BY ABOUT 20%.**

**For more information,** visit the Government of Canada climate change Web site at [www.climatechange.gc.ca](http://www.climatechange.gc.ca).

## Why Take the Challenge?

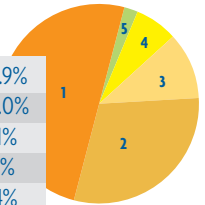
Our climate is changing. As the concentration of greenhouse gases (GHGs) increases in our atmosphere, they are causing average temperatures to rise.

In Canada, we may already be seeing signs of climate change. Melting permafrost in the North. Declining water levels in our lakes and rivers. And more extreme weather events, such as droughts, ice storms and floods.

**Every year, each Canadian produces an average of over five tonnes of GHGs.**

### Personal GHG Emissions From Energy Use in Canada

1	Passenger Road Transportation	49.9%
2	Space Heating and Cooling	29.0%
3	Water Heating	11.1%
4	Appliances	7.5%
5	Lighting	2.4%



**Added up, our individual GHGs represent roughly 28% of Canada's total.**

In addition to producing GHGs from energy use, we create more GHGs through the waste that ends up in landfills – about another half tonne per person each year.

Three greenhouse gases are of particular importance to climate change because they are closely associated with human activities: **carbon dioxide, methane and nitrous oxide.**

Take the

# One-Tonne

## CHALLENGE TODAY!

## It is time

### TO TAKE ACTION ON CLIMATE CHANGE.

By using energy efficiently and making wise consumer choices, you can reduce your individual greenhouse gas (GHG) emissions by one tonne, or about 20%.

## Why you?

Every time you drive to the store, start up a lawnmower or do anything else that uses energy from fossil fuels, you create GHGs that contribute to climate change and other emissions that create air pollution.

Like most Canadians, you probably already take steps to conserve

resources and protect the environment. Now the One-Tonne Challenge calls on you to **make a bigger commitment.**

## Where to start

This guide features tips to help you develop a practical plan to reduce your GHGs. Set a goal that makes sense and is reasonable for your household. Many of the tips will help you save money, improve air quality and protect our environment.

Each tip is weighted according to impact it will have.



### Examples

Reduce your driving by 10% if you drive about 20,000 kilometres a year.

Unplug that second refrigerator or freezer.

Select your dishwasher's no-heat or air-drying cycle.

**Whatever the actions – they add up!**

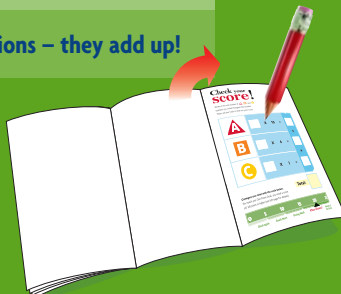
**A** = 500 kg (0.5 tonne) or more: 1–2 actions

**B** = 100–499 kg: about 4–5 actions

**C** = less than 100 kg: about 15–20 actions

## Adding up your tonne...

Fold out the inside of the back cover and you'll find a tally sheet. As you go through the guide, **circle the letters beside the actions** you are ready to take. Track them on the tally sheet, add them up, and you have your plan! Remember, count only the new actions you plan to take.



**Note:** The calculations in this guide are estimates based on national averages and can vary depending on circumstances. They are meant to illustrate the potential impact you can have by taking action.

# Meeting your one-tonne goal

## What is one tonne of GHGs?

One tonne equals 1,000 kilograms. The volume of one tonne of GHGs would fill a two-storey, three-bedroom house.

**Sound like a lot?** You can reduce your energy use and produce fewer emissions all sorts of ways. If you own a car, about half of your GHGs likely come from driving. Driving less or using energy-efficient forms of transportation will reduce your fuel consumption and emissions. Your home energy needs account for most of the rest, so smart decisions about heating, cooling, appliances and household waste add up. While the one-tonne goal is for individuals, many of the tips in this guide provide household energy savings, so it **makes sense for everyone in your home to work together.**



## What amount of GHG emissions do you produce?

Calculate your personal GHGs by using the new on-line GHG calculator. It will help you determine the sources of your current GHGs and the actions you can take to achieve your one-tonne reduction goal.

Visit [www.climatechange.gc.ca](http://www.climatechange.gc.ca).

# What's in it for you?

- Save money
- Help fight climate change
- Improve our air quality
- Protect our environment

Participating in the One-Tonne Challenge will pay off. Reducing your home energy use by 20% can help lower your heating and electricity bills by the same amount.

And there's more. Many of the things we do that create GHGs also contribute to air pollution and smog. We know that smog-causing pollutants, ground-level ozone and particulate matter or soot are increasing our health care costs, affecting productivity and contributing to crop damage. Your efforts to reduce emissions will give us cleaner air and healthier communities.

## You're not alone

Just as you're being asked to do your part, businesses, industry, governments and communities are being called upon to do theirs too. To find out more, visit [www.climatechange.gc.ca](http://www.climatechange.gc.ca).

# Are you ready?



## Take the One-Tonne Challenge!

Sharpen your pencil and circle the actions you want to take. Then, go to the tally sheet at the end of this guide to check your score!

A

C

B

C

A



# ON THE Road

## Cars and trucks

**ON OUR ROADS ARE RESPONSIBLE**

for about 18% of Canada's total GHGs. Every year, motor vehicles release more than 134 million tonnes of GHGs into the atmosphere.

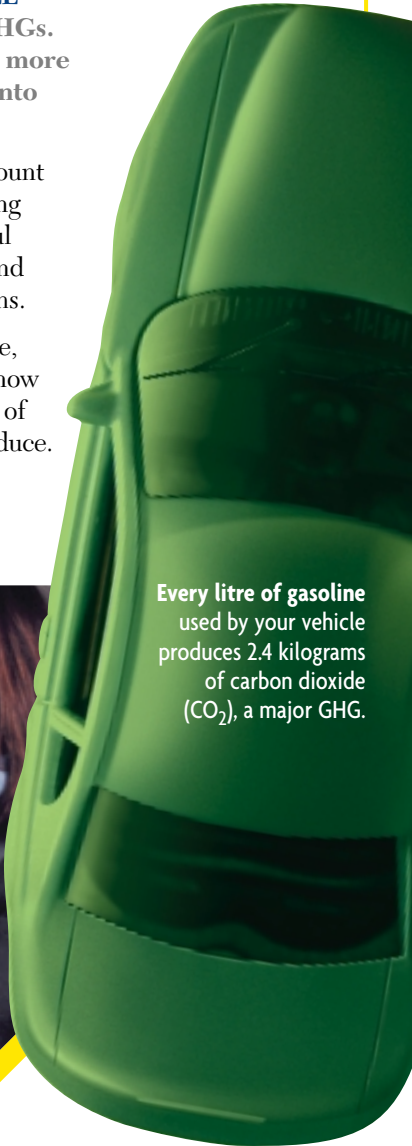
In urban areas, vehicle exhaust can account for **up to two thirds** of smog-producing pollutants. Smog is particularly harmful to the health of children, the elderly and people with cardio-respiratory problems.

How you get around, the way you drive, the type of car or truck you own, and how you maintain it determine the amount of fuel you use and the emissions you produce.

**Driving less** is the first step toward slowing climate change, improving air quality and saving money.



**Every litre of gasoline** used by your vehicle produces 2.4 kilograms of carbon dioxide (CO<sub>2</sub>), a major GHG.





## CIRCLE

THE ACTIONS YOU WANT TO TAKE



### **A Drive 10% less**

If you drive 20,000 kilometres a year, reducing your annual distance travelled by 2,000 kilometres, or 10%, will significantly reduce GHGs and save a few trips to the gas station. Use public transit or carpooling – or walk, cycle, jog or in-line skate and get exercise at the same time. Telework one or two days each week if possible. Or reduce driving by choosing services close to home or work and combining your errands into one trip. This will save you time, money and fuel, and help you avoid traffic jams.

### **C Use your vehicle's air conditioner sparingly**

Using your air conditioner in stop-and-go traffic can increase fuel consumption by as much as 20%. Try opening the windows or fresh air vents to cool your vehicle. Park in the shade if you can, to keep your car cooler and lessen the pollution and waste that occurs when gasoline evaporates from the engine and gas tank.

### **A Give up your second vehicle**

Reduce GHGs and save thousands of dollars on operating costs and depreciation, particularly if it is an older vehicle.

### **B Don't idle**

Idling for 10 minutes a day can produce about a quarter tonne of CO<sub>2</sub> emissions each year and cost you about \$70 in wasted fuel. If you stop for more than 10 seconds, except in traffic, turn off your engine and save. To learn more, visit the Idle-Free Zone at [www.oee.nrcan.gc.ca/idling/home.cfm](http://www.oee.nrcan.gc.ca/idling/home.cfm).

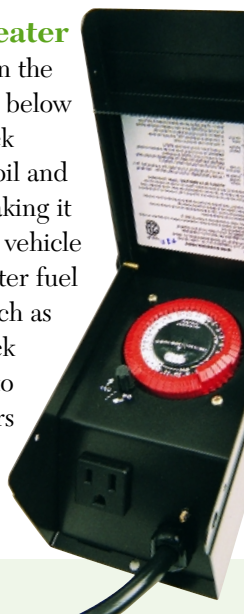
### **A Drive at the posted speed limit**

With most vehicles, increasing your cruising speed from 100 kilometres per hour to 120 kilometres per hour will increase fuel consumption by about 20%. Speeding also reduces the life of your tires. On the highway, use cruise control to maintain a steady speed and reduce fuel consumption.



### **C Use a block heater on a timer**

when the temperature drops below 0°C (32°F). A block heater warms the oil and engine coolant, making it easier to start your vehicle and improving winter fuel economy by as much as 10%. Set your block heater on a timer to switch on two hours before you plan to drive.





A typical late-model vehicle driven 20,000 kilometres a year produces:

Sport utility vehicle	<b>6 tonnes</b> of CO <sub>2</sub>
Mid-sized sedan	<b>4 tonnes</b> of CO <sub>2</sub>
Hybrid vehicle (gasoline-electric)	<b>2 tonnes</b> of CO <sub>2</sub>

**Driving smart** means driving safely, saving fuel and money and reducing emissions. For tips, visit [www.oeenrcan.gc.ca/vehicles](http://www.oeenrcan.gc.ca/vehicles).

Ferrying children to school contributes to morning rush hour traffic and our GHG emissions. The traffic volume in school zones creates an unhealthy and unsafe atmosphere for children. “Walking school buses” are supervised walks to school. Establish one at your children’s school.

Most urban Canadians can purchase a full year’s travel on public transit for **less than \$1,000**. Owning and operating a typical car costs almost **\$7,000** a year.

**One city bus** filled with passengers can **take 40 vehicles off the road** and keep about 50 tonnes of GHGs out of the atmosphere each year.

## Why choose sustainable transportation?

Transportation choices such as **cycling, in-line skating, walking, jogging, carpooling, public transit** and **teleworking** reduce GHGs and protect the quality of air we breathe. Other benefits include getting exercise, avoiding traffic jams and saving money.

**Learn more** about the health benefits in Canada’s *Physical Activity Guide* at: [www.hc-sc.gc.ca/hppb/paguide](http://www.hc-sc.gc.ca/hppb/paguide).

**Learn how** to get to work using your local public transit system at: [www.cutaactu.ca/content.asp?ID=122](http://www.cutaactu.ca/content.asp?ID=122).

**Find** carpooling tips and a free, on-line, ride-matching tool at: [www.carpooltool.com](http://www.carpooltool.com).

**Visit** [www.tc.gc.ca](http://www.tc.gc.ca), [www.ec.gc.ca/transport/home.htm](http://www.ec.gc.ca/transport/home.htm) and [www.oeenrcan.gc.ca](http://www.oeenrcan.gc.ca) for more information.

## Take the Commuter Challenge

This is a friendly competition among Canadian cities, coordinated nationally by Go for Green, to see which one can reduce energy use and cut air pollution the most by using a combination of active and sustainable modes of transportation. Make a commitment to use alternative forms of transportation during **Clean Air Day**, in the first week of June, then register the mode you used and the distance you travelled. Visit [www.commuterchallenge.ca](http://www.commuterchallenge.ca) and [www.ec.gc.ca/cleanair](http://www.ec.gc.ca/cleanair).

## Maintain your vehicle see pages 8–9

Receive a free emissions test and find out how many GHGs and other pollutants your vehicle produces and how to reduce them. Vehicle emissions systems need special attention to ensure efficiency and good environmental performance. Find out if Environment Canada’s free **LET’S DRIVE GREEN Clinic** will be held in your city. Visit [www.ec.gc.ca/transport/clinics](http://www.ec.gc.ca/transport/clinics).

## The EnerGuide Awards

Each year, Natural Resources Canada recognizes the most fuel-efficient vehicles in their class. Winning vehicles are determined by testing that simulates 20,000 kilometres annually (55% in the city, 45% on the highway). Names of award-winning vehicles for past years are also available at [www.oeenrncan.gc.ca/vehicles](http://www.oeenrncan.gc.ca/vehicles).



## Did you Know?

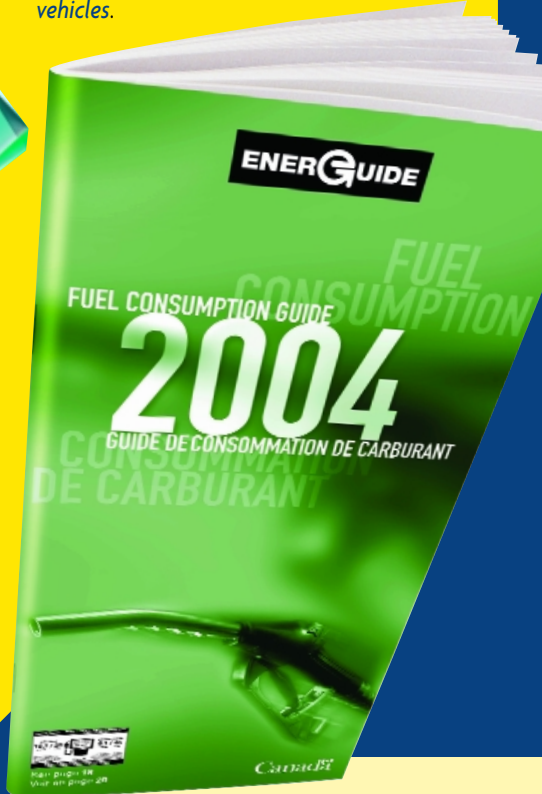
About **70% of cars and light trucks on the road have at least one tire that is over- or under-inflated**. Improper inflation can not only reduce the life of the tire and increase fuel consumption, it can also lead to sudden tire failure causing serious personal injury. So check your tire pressure regularly, including your spare tire. Visit [www.betiresmart.ca](http://www.betiresmart.ca). For more information on tire safety or to receive your free "Riding on Air" brochure, call 1 800 333-0371 or visit [www.tc.gc.ca/roadsafety](http://www.tc.gc.ca/roadsafety).

## Did you Know?

Our average meal travels about 2,500 kilometres to our plates. A 40-tonne transport truck releases about five tonnes of GHGs for one typical shipment of food – about equal to the GHGs an average Canadian produces annually. Find out about buying seasonal and local goods at [www.climatechangesolutions.com](http://www.climatechangesolutions.com).

## Save on fuel costs

Check and compare the fuel consumption for all passenger vehicles and light-duty trucks sold in Canada. Use the **Fuel Consumption Guide** to select the most fuel-efficient vehicle that meets your needs. Order your free copy at **1 800 387-2000** or visit [www.oeenrncan.gc.ca/vehicles](http://www.oeenrncan.gc.ca/vehicles).



**Hybrid-electric vehicles** combine a battery with an internal combustion engine. An on-board generator produces electricity, and fuel efficiency is about 20% to 50% greater than that of a traditional vehicle.







## CIRCLE

THE ACTIONS YOU WANT TO TAKE

### **B** Keep your vehicle fully tuned

A poorly maintained engine can use up to 50% more fuel and produce 50% more CO<sub>2</sub> than one that runs properly. Neglecting to replace worn-out oil and filters results in poor engine performance, higher fuel consumption and, possibly, severe engine damage.

### **B** Use ethanol-blended gasoline

If all gasoline in Canada were blended with ethanol, we could reduce our GHGs by 5 million tonnes per year. To find a gasoline station near you that carries this fuel, visit Canada's *Directory of Ethanol Retailers* at [www.greenfuels.org/ehretail.html](http://www.greenfuels.org/ehretail.html).



### **B** Check your vehicle's tire pressure once a month

You could reduce GHGs by at least one eighth of a tonne each year and save at least \$50 in fuel costs. Always check tires when they are cold and remember to check for foreign objects or cuts, cracks or other signs of wear, and rotate your tires regularly for optimum performance. Consult your owner's manual for the recommended tire pressure, or have a professional check the pressure for you. Visit [www.betiresmart.ca](http://www.betiresmart.ca) or [www.tc.gc.ca/roadsafety](http://www.tc.gc.ca/roadsafety).

### **C** Remove roof racks when not in use.

Even empty racks increase aerodynamic drag and boost fuel consumption. If the racks are permanent, factory-installed units, the extra fuel cost will be minimal.

### **B** Don't buy more than you need

Four-wheel drive, all-wheel drive, engine size, vehicle weight and tire size influence the amount of fuel your vehicle uses. Options such as power windows and power seats also add weight to cars, making engines work harder and burn more fuel.

### **A** Buy the most fuel-efficient vehicle

that meets your everyday needs. Reduce your GHGs by up to one tonne a year while saving money on fuel costs. Check the fuel consumption information on the EnerGuide label or in the *Fuel Consumption Guide* (see page 8).

**ENERGUIDE** Ask your dealer for the **FUEL CONSUMPTION GUIDE** or call 1-800-387-2000.

**CITY / VILLE**  
**10.1 / 28**  
L/100 km mpg

Estimated Estimation  
annuelle du coût annuel  
du coût de carburant  
**\$1,112**

**HIGHWAY / ROUTE**  
**6.1 / 46**  
L/100 km mpg

Données obtenues selon les critères et méthodes d'essais approuvés par le Gouvernement du Canada. La consommation réelle de carburant de ce véhicule peut varier. Consultez le Guide de consommation de carburant.

These estimates are based on the Government of Canada's approved criteria and testing methods. The actual fuel consumption of this vehicle may vary. Refer to the Fuel Consumption Guide.

Canada

**Demandez le GUIDE DE CONSOMMATION DE CARBURANT à votre concessionnaire ou composez le 1-800-387-2000.**

# AT Home



## It takes a lot

OF ENERGY TO RUN A HOME –  
for heating and cooling,  
major appliances, hot water  
and lighting.

Maintaining a comfortable living space can be expensive, whether you rent or own your home. So it is important to “**shop smart**” for the most energy-efficient appliances and equipment and to keep them well maintained.



### Are you heating your home or the great Canadian outdoors?

Air leakage represents between **25% and 40%** of the heat loss from an older home. To view the guide *Keeping the Heat In*, visit [www.oeenrcan.gc.ca/keep\\_heat\\_in](http://www.oeenrcan.gc.ca/keep_heat_in).





## CIRCLE

THE ACTIONS YOU WANT TO TAKE

### **A** Install one of today's energy-efficient furnaces

It can save you up to 25% of your home heating costs each year, reduce your GHGs and, depending on the efficiency of your old furnace, pay you back for its higher initial cost in about seven years.

### **A** Use caulking and weather-stripping to seal air leaks.

Get a professional to help you reduce your home heating needs by up to 20% by getting rid of drafts and leaks around windows, doors, baseboards and attic hatches. At the same time, seal electrical outlets and switches on outside walls with foam gaskets; on inside walls, use childproof plugs or combination cover plates.

### **A** Look for the ENERGY STAR® label

on windows and sliding glass doors. These energy-efficient products reduce energy costs and create less condensation. Visit [www.energystar.gc.ca](http://www.energystar.gc.ca).

### **A** Install storm windows

If your windows are single-glazed, they will add an extra layer of protection. Windows can account for up to 25% of total house heat loss.

### **C** Replace exterior doors

that are in poor repair with core-insulated, steel-clad doors or storm doors.

### **C** Keep your furnace well maintained

and change or clean furnace filters every couple of months. Dirty air filters block airflow and can damage the heat exchanger.

### **C** Seal and insulate warm-air ducts

Aluminum duct tape can easily seal leaks and reduce duct air leakage by up to 25%. Insulation can also reduce heat loss from unheated areas, such as the basement or crawl space.

### **A** Upgrade your insulation

in walls, the basement and attic. Insulating your basement walls and attic can reduce your energy bill by as much as 30%.

### **A** Lower your thermostat

For every 1°C (2°F) you lower your thermostat, you save 2% on your heating bill. A reduction of 3°C (5°F) at night and when you are away during the day provides optimal savings.





## Building a new home? R-2000\* spells performance

This made-in-Canada standard promotes the use of cost-effective, energy-efficient building practices and technologies. Homes built to the R-2000 Standard offer exceptional indoor air quality, comfort and savings. By using about 30% less energy than a conventionally built new home, every R-2000 home also cuts tonnes of GHGs. Visit [www.oeenrcan.gc.ca/r-2000](http://www.oeenrcan.gc.ca/r-2000) for more information.



## Advice you can live with

EnerGuide for Houses experts can advise you on how to save energy, save money and improve your comfort at home. From our experience, it's possible to reduce the average energy use of an older home (25 to 50 years old) by 20% to more than 35% – a reduction of more than two tonnes of GHGs each year. **Grants are now available to help you carry out recommended improvements to your home.** Visit [www.oeenrcan.gc.ca/houses](http://www.oeenrcan.gc.ca/houses).



## Green power for sale

Ask your local energy supplier about switching to or buying some “green” power, such as **wind energy or solar power** – electricity produced with fewer or no GHGs or harmful air pollutants. More demand and better technology will make it more accessible and, as a result, less expensive to generate in the future.

As well as encouraging suppliers of green power to increase their capacity, you are helping to reduce the demand for electricity from other traditional sources that burn fossil fuels – such as coal, oil or natural gas – that contribute to climate change and cause extensive air pollution.

For more information, visit the Web sites of the Canadian Solar Industries Association at [www.cansia.ca](http://www.cansia.ca) and the Canadian Wind Energy Association at [www.canwea.ca](http://www.canwea.ca).

\*R-2000 is an official mark of Natural Resources Canada.



## CIRCLE

THE ACTIONS YOU WANT TO TAKE

**C Shut off the pilot light** of your natural gas fireplace or wall heater during summer months. If you don't know how to relight the pilot, ask your heating contractor to show you during your next servicing.

**C Install a ceiling fan**  
Change the direction of the fan to push warm air down in the winter. This especially benefits houses with electric baseboards or high cathedral ceilings. If you need a fan with lights, choose one with compact fluorescent lights to further reduce electricity use and heat buildup in summer.

**C Remove window air conditioners for the winter.**  
If they are fixed in place, seal them with caulking or tape and cover them with an airtight, insulated jacket to avoid heat loss.

**C Keep window curtains open** during the **day in winter**. This allows passive solar energy into your home and can save you up to 5% on home heating. Close the curtains in the evening.

**C Keep blinds, curtains and windows closed** during the **day in summer** to help keep your home cooler.

**B Use fans** as your first line of defence against summer heat. For example, a 60-watt ceiling fan costs between 8¢ and \$1.50 to operate monthly, while an air conditioner can cost between \$6.75 and \$40.50 a month.

**B Set your air conditioner at 24°C (75°F)** and raise it when you go out, or set your programmable thermostat to do this. For each degree set below 24°C (75°F), you use 3% to 5% more energy. This recommended setting will give you the most comfort at the least cost.

**C Clean the air conditioner's filter** every month. A dirty air filter reduces airflow and may damage the unit. Clean filters enable the unit to cool down quickly and use less energy. If you have a central air conditioner, regularly clean a reusable filter or change the filter at the beginning of the cooling season.

**C Turn off all sources of heat**, such as lights, appliances and electrical equipment, when not in use. In summer, if you can, do your baking, washing, drying and ironing early in the morning or in the evening.





**CIRCLE**

THE ACTIONS YOU WANT TO TAKE

## Major appliances

Appliances such as clothes washers, refrigerators, dishwashers and ovens **add up to about 7.5%** of our total GHGs each year.

Over the past two decades, appliance manufacturers have significantly improved the energy efficiency of their products.

**Newer models consume far less energy**, resulting in fewer GHGs. They cost much less to operate than older models, too.

**It is worth paying attention to:**

### ENERGUIDE

The EnerGuide label gives information on how much energy the appliance will typically use in a year compared with similar models.



The ENERGY STAR® symbol identifies the most energy-efficient appliances in each class.

**For more information,** visit [www.oee.nrcan.gc.ca/energystar](http://www.oee.nrcan.gc.ca/energystar).

## **B** Maintain your refrigerator and freezer for better energy use

Clean the refrigerator heating coils regularly. When you clean them, check the condition of the coils and components at the back of the unit. Keep the rubber door seals clean and tight. They should hold a piece of paper snugly. If the paper slips out easily, replace the seal.

## **B** Look for an ENERGY STAR®-qualified refrigerator

if you're in the market for a new one. For example, a 2002 model uses less than half the electricity of a unit built 10 years ago and can reduce GHGs by more than 0.2 tonne each year.





## **B** Unplug that second refrigerator or freezer

Unless you really need these appliances, don't waste energy or money needlessly. This tip is particularly important if they are older, less-efficient models.

## **C** Select the dishwasher's no-heat or air-drying cycle

Turn off the electric element that heats the interior of the unit and causes the water to evaporate. It is easy to do and will save on your hydro bill. Scrape off your dishes instead of rinsing them and run the dishwasher only when it is full.



## **C** Increase the efficiency of your refrigerator and freezer

Keep them away from heat sources (direct sunlight, furnace vents and radiators) and appliances (oven, stove and dishwasher) that can make them work harder to stay cool. At the same time, check the temperature settings. Keep your refrigerator temperature between 1.7°C (35°F) and 3.3°C (38°F) and the freezer compartment at -18°C (0°F) for maximum efficiency and safety.

## **B** Rinse in cold water and wash in warm

Clothes rinsed in cold water come out as clean as those rinsed in warm water. Washing in warm rather than hot water uses 50% less energy, and your clothes will come out just as well rinsed and, depending on the fabric, less wrinkled.

## **C** Avoid over-drying clothes

Clothes should dry in 40 to 60 minutes. Better yet, hang clothes outdoors to dry when the weather permits. If you are buying a new dryer, look for one with a moisture sensor. It will turn off automatically when clothes are dry.

## Did you Know?

### Front-load washing machines

or water-efficient top-loading models that are ENERGY STAR®-qualified use about 40% less water per load and less detergent than regular top-loading washers.



### C Install outdoor automatic timers

You won't have to remember to turn your outdoor lights on in the evening and off during the day. Installing a timer can cut your outdoor lighting energy use by up to half. Or use motion detectors, which switch on automatically when people move close to them and switch off after a few minutes.

### B Use more-efficient light bulbs

The amount of electricity needed to light a Canadian home results in almost one third of a tonne of GHGs each year. By replacing five of the most used standard bulbs in your home with ENERGY STAR®-qualified compact fluorescent light bulbs, you can reduce your GHGs and save about \$30 each year.



▶ **More and more Canadians have home offices.** These workstations are often equipped with computers, printers, fax machines, scanners and audio systems. You can also use many of the following tips at work.



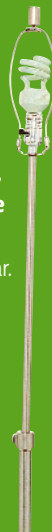
Did you Know?

Each Canadian uses  
**up to four trees**  
every year in paper  
products.



### If every household

in Canada changed **just one traditional incandescent light bulb** to an ENERGY STAR®-qualified compact fluorescent light, Canadians would **save over \$73 million** in energy costs every year. It would also reduce GHGs by 397,000 tonnes per year – **the same as taking 66,000 cars off the road!**





**C Ensure your computer system is set up to use its energy-saver option**

Machines are often shipped with this feature disabled. If you buy an ENERGY STAR®-qualified computer, the power-saving feature is automatically set.

**C Look on the box for ENERGY STAR®-qualified equipment**

It will keep your home energy use, GHG emissions and costs down.



**C Use as little paper as possible**

Printing, photocopying and faxing use energy. Use e-mail more often – it is quicker, less expensive and healthier for the environment. Also use recycled paper whenever possible.

**C Turn off lights and equipment when a work area isn't being used**

Even better, if you don't need them, don't turn the lights on in the first place. Natural light saves energy and is easier on your eyes. And a computer that runs 24 hours a day uses between \$75 and \$120 worth of electricity each year. You can save about \$15 on your annual energy bill with an ENERGY STAR®-qualified computer in standby mode.

**C If you are buying a laser printer, look for energy-saver features**

Units that automatically switch to standby when not in use reduce electricity consumption by more than 65%.

**C Buy a monitor that is the right size for your needs**

Generally, the larger the monitor, the more energy it consumes, with the exception of an LCD monitor.





## CIRCLE

THE ACTIONS YOU WANT TO TAKE

**C Capture rainwater** for your garden. The water you use for your lawn doesn't have to come from a tap. A cistern or a rain barrel will capture and store rainwater for irrigation. Make sure your barrel is covered with a tight-fitting lid or screen to keep disease-carrying mosquitoes from breeding there.



**B Practice "grass cycling"** Leave grass clippings on your lawn where they quickly break down and add needed nutrients to your lawn. Keeping grass out of your garbage can save 0.1 tonne in GHGs.

**C Water your garden or lawn early** in the morning, after the dew has dried, to reduce losses due to evaporation. More than half of the water applied to lawns and gardens can be lost due to evaporation or run-off because of over-watering. As a rule, most lawns and gardens require little more than two to three centimetres of water per week.

**C Avoid using chemical pesticides or fertilizers** on your lawn and garden. Chemical fertilizers are a source of nitrous oxide, a GHG. Try using organic products – they are better for our environment and healthier for your lawn and your family. Visit [www.davidsuzuki.org](http://www.davidsuzuki.org).

**C Limit your use of gas-powered lawn mowers, leaf blowers and snow blowers.** Using a manual push mower or an electric mower instead of a gas-powered mower will reduce GHGs. Using a typical gas-powered mower produces 48 kilograms of GHGs in a season and as much air pollution as a car driven 550 kilometres.

**C Maintain your pool efficiently**

Use pump timers to regulate energy and the length of time your pool is heated. Cover your pool with a thermal blanket to reduce heat loss and water evaporation. And use cost-effective solar panels to heat your pool.



**C Plant trees**

A well-placed line of evergreens on the north side of your home can shelter it against cold winter winds and reduce your home's demand for heat. Similarly, shade trees on the south side can keep your home cooler in summer and reduce the need for air conditioning by shading your home's windows and walls.

▶ **Energy consumption isn't limited to inside your house.** Lawn mowers, leaf blowers, snow blowers and other maintenance tools also use a lot of energy. Garden and lawn maintenance can also involve excessive water consumption and contribute to air pollution.

**CIRCLE**  
THE ACTIONS YOU  
WANT TO TAKE

**B Install a low-flow shower-head** with a shut-off lever. This do-it-yourself project takes only minutes. But it delivers big savings in water consumption and water heating, because it allows you to interrupt water flow. A low-flow showerhead uses 60% less water than standard fixtures.

**B Go for a high-efficiency water heater unit**  
Some new models heat water only when you need it, rather than storing hot water in a tank.

**C Take a quick shower** instead of a bath. A five-minute shower, for instance, uses up to 50% less hot water than a bath.

**C Avoid running the tap** while shaving, brushing your teeth or doing dishes. Partially fill the sink with water and stop about 80% of that clean water from going down the drain – along with your money.

**C Insulate water pipes** to reduce heat loss. Insulate the first two metres of the hot- and cold-water pipes from the water heater. A significant amount of heat travels through these pipes and can be lost, particularly through unheated areas such as basements and crawl spaces. For safety, don't place any pipe insulation within 15 centimetres (6 inches) of the exhaust vent at the top of standard natural gas/propane or oil-fired water heaters, and never insulate plastic pipes. If you have an electric water heater, insulate the tank for further energy savings.

**C Turn off your cottage's water heater** when you leave. It wastes energy to keep water hot when it isn't needed. It doesn't take long to heat up when you return.



Many municipalities have water conservation programs. Contact your local municipality about the wise use of water.

▶ **Saving water means saving energy.** We use water daily for drinking, cooking, washing and other household needs. From the moment you turn on the tap, your water comes out treated by your local municipality. And it travels back to your local water-treatment centre to be treated again before it is returned into nearby rivers or lakes.

All this movement of water requires energy. **The less water you use, the less need for energy to pump, treat and distribute it to your home.**

Add on the cost to heat it in your water tank using energy that produces GHGs. **Heating water makes up about one tenth of the average total home energy bill.** There are many ways to use less water, reduce energy use and GHGs, and save money. Visit [www.ec.gc.ca/water](http://www.ec.gc.ca/water) for more information.

## The EcoLogo<sup>™</sup> labelling system

will help you identify a wide range of environmentally friendly products and services. For a complete listing of EcoLogo<sup>™</sup>-certified products, visit the Environmental Choice<sup>™</sup> Web site at [www.environmentalchoice.com](http://www.environmentalchoice.com).



## Watering your lawn

uses 700 litres in half an hour. That is more than the average daily water consumption of an entire household.

## Trees absorb and store CO<sub>2</sub>

from the atmosphere and filter out pollution. Consider this fact when landscaping. Visit the Tree Canada Foundation at [www.treecanada.ca](http://www.treecanada.ca).

## Did you Know?

### In 2000, Canadians generated over 31 million tonnes of waste.

Of this, 23 million tonnes were sent for disposal. **Imagine 21 football fields piled one kilometre high with garbage!**

**Three quarters of our waste goes to landfills**, with a small fraction going to incineration. The remaining 25% of our garbage is either recycled to new materials or composted. Studies show that about **70% of the household waste** we put out for disposal could be either recycled or composted.

### Some municipalities in Canada

have reduced the amount of household waste sent to landfills **by over 60%** through expanded recycling, composting and other programs.

**In 2000, there were more than 350** composting facilities in Canada, which processed **almost one million tonnes** of organic matter.



- ▶ **The energy used** in making products and their packaging, the disposal of all this waste, and the methane generated in landfills contribute to GHG emissions – about half a tonne per person each year.

**Recycling saves energy and conserves our natural resources.** Making goods from recycled materials instead of new materials uses less energy. When we use less energy we burn fewer fossil fuels and emit fewer GHGs into the atmosphere.

When we don't compost the organic household waste from our kitchens and yards, it decomposes in landfills, producing methane – one of the main GHGs. We can avoid generating this methane by using a home composter or a central composting facility.

We can all put less stress on the environment by **being selective consumers and recycling and composting** whenever we can.



**CIRCLE**

 THE ACTIONS YOU  
WANT TO TAKE

**B Recycle all recyclable materials**

Find out what materials can be recycled in your municipality and challenge your household to make sure those materials don't get thrown in the garbage. Every extra kilogram of fine paper you recycle is four kilograms fewer GHGs.

**B Compost your organic kitchen waste**

You can compost fruits, vegetables, tea bags and coffee grounds, as well as leaf and yard waste. Compost makes valuable fertilizer and reduces the amount of waste in landfills. By composting, a family of three can reduce GHGs by more than one eighth of a tonne each year.

**C Pay attention to goods and packaging**

Evaluate your purchases and consider how they contribute to your household waste. Buy more durable goods and re-usable products. And ask for products with less packaging.


**Learn more**

about composting and how to start up your own composter. Visit The Composting Council of Canada at [www.compost.org](http://www.compost.org).

**For a quick summary,**

check out Environment Canada's composting Web site at [www.ns.ec.gc.ca/udo/paydirt.html](http://www.ns.ec.gc.ca/udo/paydirt.html).

# For more information

on how to improve your home or vehicle energy efficiency and reduce GHGs, visit any of the following Government of Canada Web sites:

## **Government of Canada Climate Change**

[www.climatechange.gc.ca](http://www.climatechange.gc.ca)

## **Natural Resources Canada's Office of Energy Efficiency**

[www.oee.nrcan.gc.ca](http://www.oee.nrcan.gc.ca)

## **Transportation and the Environment**

[www.ec.gc.ca/transport](http://www.ec.gc.ca/transport)

## **Transport Canada**

[www.tc.gc.ca/programs/Environment/climatechange](http://www.tc.gc.ca/programs/Environment/climatechange)

## **Clean Air**

[www.ec.gc.ca/air](http://www.ec.gc.ca/air)

[www.hc-sc.gc.ca/air](http://www.hc-sc.gc.ca/air)

## **Science of Climate Change**

[www.ec.gc.ca/climate/overview\\_science-e.html](http://www.ec.gc.ca/climate/overview_science-e.html)

## **Waste/Pollution Prevention**

[www.ec.gc.ca/cppic/community/en/athome.cfm](http://www.ec.gc.ca/cppic/community/en/athome.cfm)

## **Water**

[www.ec.gc.ca/water](http://www.ec.gc.ca/water)

[www.hc-sc.gc.ca/waterquality](http://www.hc-sc.gc.ca/waterquality)

## **Health Canada**

[www.hc-sc.gc.ca/cc](http://www.hc-sc.gc.ca/cc)

To obtain additional copies of this guide,  
call **1 800 O-Canada (1 800 622-6232)** TTY 1 800 465-7735.

The One-Tonne Challenge will work with partners such as retailers, employers, industry and communities to spread the word.



30% post-consumer fibres

Your Guide to the One-Tonne Challenge – Take action on climate change.  
Cat. No. M144-27/2003E ISBN 0-662-35754-X March 2004  
*Aussi disponible en français.*

# Remember...

## **The one-tonne goal is for individuals.**

When you set an overall goal for your household or family, consider what is reasonable and achievable. This will depend on your driving habits, home energy use and the size of your household. A family of four, for example, could work toward reducing its emissions by four tonnes (one tonne per person). However, it may be too difficult for a couple with five children to achieve a seven-tonne reduction. Set a target that makes sense for your household and find ways for each family member to contribute.

## **There is no one-size-fits-all approach.**

Where we live can be a significant factor in how we reduce our GHGs. Nova Scotia, Saskatchewan and Alberta generate most of their electricity from coal, which produces considerable GHGs. Quebec, British Columbia and Manitoba generate most of their electricity from hydro, which produces fewer GHGs. Regardless of where you live, reducing the amount of electricity you use makes sense.

## **Some actions have more impact than others in the same category.**




For example, in some cases, just replacing your old furnace could achieve your one-tonne reduction. Try the Government of Canada's on-line GHG calculator if you would like a more precise score that better reflects your individual situation. Visit [www.climatechange.gc.ca](http://www.climatechange.gc.ca).



# Check your score!



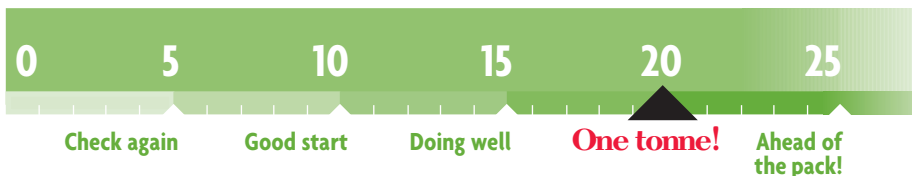
Write in the total number of **A**, **B** and **C** symbols you circled throughout this booklet. Then add your totals to find out your score.

	<input type="text"/>	X 10 =	<input type="text"/>
	<input type="text"/>	X 4 =	<input type="text"/>
	<input type="text"/>	X 1 =	<input type="text"/>
			+
			+
			+

Compare your total with the scale below.

To reach your one-tonne goal, you need a score of 20 points or higher (see left page for details).

**Total:**





Check your  
**score!**



Flip out  
back cover  
to access  
tally sheet.



Keep this guide handy  
to remember the actions  
that will help you meet  
your One-Tonne Challenge!



[www.climatechange.gc.ca](http://www.climatechange.gc.ca)



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