



Helping in Your Own Way

The Intergovernmental Panel on Climate Change says that climate change is caused mostly by people – because we are adding too many greenhouse gases (GHGs) to the atmosphere. So what can we do?

We can stop adding GHGs to the atmosphere!

This won't stop the problem immediately as the GHGs we have already put up there will continue to change the climate for quite a while. But we can slow down the changes. We've got to start somewhere! We've got to start now!

This backgrounder outlines how many GHG emissions individuals put into the atmosphere. It also provides some ideas on how you and your family can reduce your GHG emissions.

Just How Many GHGs Are We Putting Up There?

In 1995, Canada was producing about 600 megatonnes of greenhouse gases a year. Individual Canadians doing things such as driving cars, heating homes, heating water, or playing video games produce about 25% of Canada's GHGs. About 75% comes from things such as heating commercial and government buildings, running industries or trucking food and goods around the country.



On a person-by-person basis, Canadians put more GHGs into the atmosphere than people in most other countries in the world! Canada produces about two per cent of all the world's emissions – yet we only have about 0.5% of the world's population! It's time to go on a greenhouse gas diet!

How do you weigh a greenhouse gas?

Although carbon dioxide is a gas that makes up part of the air we breathe, it is something that we can weigh:

- One tonne = 1,000 kilograms
- One megatonne = 1 million tonnes (or 1 billion kilograms!).

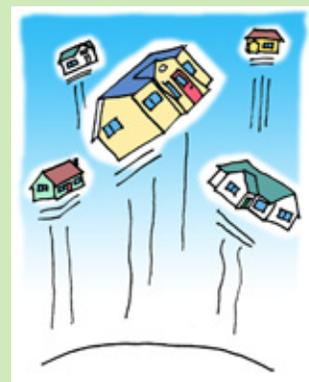


The One Tonne Challenge

So what does one tonne of carbon dioxide look like? Well, one tonne would completely fill the inside of an average home.

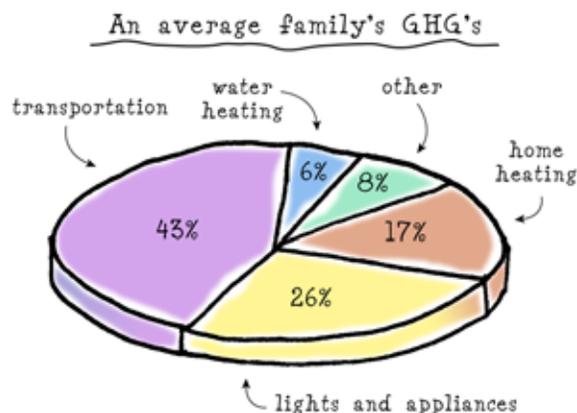
The average Canadian puts over five tonnes of greenhouse gases (GHGs) into the atmosphere every year (carbon dioxide is the main GHG we pump out). This means that we each fill up about five houses a year with carbon dioxide and the other GHGs.

The Government of Canada is challenging every Canadian to see if they can knock one tonne of GHGs out of their lives by 2008–2012. Do you think you are up for it?



How Can We Cut the GHG Habit?

Individuals produce about 25% of all of Canada’s GHG emissions. We can shrink those GHG emissions by doing some simple things at home, such as changing how we get around, and making different day-to-day choices.



source: Environment Canada 2001

Now that’s heavy!

One litre of gasoline for our cars and trucks weighs about 0.75 kilograms. However, when it is burned in your vehicle, it produces about 2.4 kilograms of carbon dioxide! (That is because each carbon atom in the gasoline, when burned, attaches to two oxygen atoms from the atmosphere to form carbon dioxide). Each year, the average car in Canada produces three to four times its own weight in carbon dioxide!



Getting Rid of the Gas Guzzlers

For most Canadians, half of the GHGs we create are produced when we travel around in cars, trucks, planes, snowmobiles or other forms of transportation. One of the main “bad guys” in the climate change story is the personal vehicle – cars and trucks.

If we drove 10 percent less, we would reduce greenhouse gas emissions by 0.2 to 0.8 tonnes per car, per year (depending on how much gas our vehicle uses, and how much we drive).

Another major climate change villain is the airplane, something we use a lot in the north. Plane travel in Canada was responsible for over eight percent of the emissions in the transportation sector in 1999.

It's not like we all have to stay home to reduce how many GHGs we produce. But we do need to be a bit smarter about how we get around. Here are a few ideas about how you can reduce your GHGs whenever you go somewhere:

- Walk or ride your bike instead of hopping in a car or on a snowmobile.
- Encourage your family to buy a fuel-efficient vehicle. Over time, a new efficient car will save your family a lot of money on gas.
- If your family uses snowmobiles or boat engines, look at getting a new 4-stroke engine. They use much less fuel than older two-stroke models.
- Carpool with friends and neighbours. If you are all going to the same place, why not pile into one car instead of two or three!?
- Take the bus – if there is one in your community – instead of a car.
- Instead of idling your car or truck while you wait for someone, turn off your engine (or ask your driver to).



**It's not just the type of car;
it's the type of driver!**

A well-tuned car with properly inflated tires can improve your car's fuel efficiency by 5-15%. Energy efficient driving habits, such as minimizing idling, driving within the speed limits, and accelerating and decelerating gradually, can improve your fuel consumption by up to 25%.

*From: "Taking Charge:
Personal Initiatives"
David Suzuki
Foundation, 1997.*



Two Strokes and You're Out?

Many people in the north use boats, all-terrain vehicles (ATVs) and snowmobiles to get around. However, many of these vehicles use two-stroke engines (chainsaws and lawn mowers also use two-stroke engines). These two-stroke engines put out a lot of GHG emissions. Up to one-third of the fuel can pass through two-stroke engines unburned so they can also waste a lot of expensive fuel! This also causes a lot of pollution in the water and on the land.



But manufactures have been making new four-stroke outboard motors and snowmobiles. These four-stroke engines use a lot less fuel and pump out much fewer GHG emissions. The four-stroke engines are also a lot quieter! So next time you or someone in your family is buying an off-road vehicle or a boat, try to make sure it has a four-stroke engine!

High five to the hybrid!

If you have to have a car in your life, consider getting a hybrid!

This is a car that uses two forms of power – batteries and gas. When you cruise the highway, the car uses gas and charges up batteries at the same time. When you are driving at slower speeds around town, the batteries kick in and you are gas-free!

These hybrids get twice the mileage that the average car gets. They can get up to four or five times better mileage than some SUVs and trucks! Driving a hybrid instead of a regular car can help reduce the amount of GHGs you put into the atmosphere.



Idling gets you nowhere!

Can you guess how much time Canadians jointly spend idling their cars each day in the middle of winter!?

- 1 million minutes a day?
- 15 million minutes a day?
- 75 million minutes a day?



A recent study of Canadian driving habits indicated that, all together, Canadians idle their cars for a total of 75 million minutes a day in the winter! That is the same as idling one car for 144 years! Even in warmer summer weather, we still idle about 46 million minutes a day.

So why do we do it? Most people would probably say that it is better for the vehicles if you let them run to warm up in the winter. However, with computer-controlled, fuel-injected engines, you need no more than 30 seconds of idling on winter days before driving away. If you idle your vehicle, only the engine warms up. If you drive it, all the parts warm up and that is better for the car!

If a vehicle is going to be idling for more than 10 seconds, the driver should turn it off (unless they are in traffic). You will use less fuel restarting it than if you keep it running. This is true for vehicles that use gasoline or diesel.

So let's kick the idling habit! It will save money and prevent a lot of carbon dioxide from going into the atmosphere!



Getting GHG-Smart at Home

Nunavut's 27,000 inhabitants burned a staggering 36 million litres of imported fuel last year to brighten homes, chill food, cook meals, wash dishes, launder clothes, surf the Net and watch television. Even more was burned – 58 million litres – to keep warm. And that's not counting the three million litres of gasoline used to power the growing numbers of boats, snowmobiles and cars.

*From: "A burning question: Taming Nunavut's addiction to fossil fuels,"
by Dwane Wilkin, Nunatsiaq News,
January 10, 2003*

On the home front, Canadians produce most of their GHGs when they keep their houses warm. This is particularly true in the north because of our longer, colder winters. We produce these GHGs when we heat our homes because we usually burn oil or propane in our furnaces and heaters (an efficient wood stove does not produce extra GHGs if it is used right).

Watching TV, playing video games or turning on the lights often produces GHGs (if your electricity is produced with a non-renewable resource like diesel) (*see Backgrounder 13 on renewable energy*). Heating up our water for showers, dishes or laundry is another way we can also create GHGs.

Here are some ways you and your family can reduce your GHG emissions at home:

- Keep the heat in. Ensure you have good weather-stripping around doors and windows and put caulking in the cracks. Think about putting more insulation in your walls and ceiling.
- Keep the heat down. Set the thermostat at around 18°–19° during the day, and turn it down at night. It's better to put on a sweater than to turn up the heat!
- Reduce your hot water use. Install low-flow showerheads, and keep showers short. Use cold water for washing clothes.
- Get your family to buy energy-efficient appliances (like washing machines, stove, and fridges). New models generally use less energy. For example, a new refrigerator uses 40 per cent less energy than a model produced before 1993.





- Use compact fluorescent light bulbs in place of regular, incandescent bulbs. Compact fluorescents use one quarter of the electricity, and last a hundred times longer than incandescent bulbs!
- Reduce how much energy you waste. For example, use energy-efficient lights, and turn them off when they're not needed. Don't keep the fridge open longer than necessary. Turn off your computer and video games when you're finished. And don't heat up the whole oven for one snack. You can probably think of more, right?

Day-to-Day Choices – To Emit or Not to Emit, That is the Question

Our everyday choices affect how much energy we consume.

For instance, the average food item in Canada today travels some 2,000 km just to get to our tables (and even farther for northerners). Think of how far a banana has travelled next time you eat it! Could you maybe eat something from closer to home next time? After all, the further the food travels, the more fuel will be burned – so more GHGs will go into the atmosphere.

GHGs are also created when things like running shoes, computer games, or millions of other manufactured goods are made, packaged and moved from factories to stores. When you decide *not* to buy something, you're helping to reduce your GHG emissions.

This is because everything we use requires energy to make and usually when you use energy, you create more GHGs. Energy is used by the workers who might drive to work to make the product, by the factory when it produces the item and by the truck or plane that transports the item.

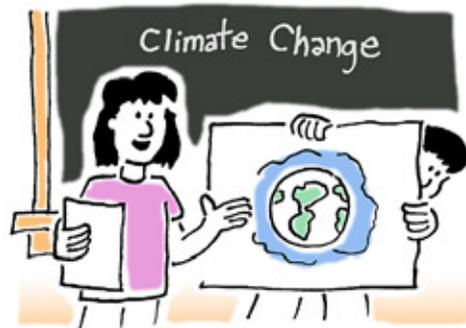
The stuff that we throw away can also add to greenhouse gases. When it goes to the dump, it decomposes and generates methane gas, a strong GHG. Most North Americans throw away about two kilograms of garbage every day. So it helps if you reduce, reuse and recycle to keep things out of the dump!



Pass It On!

Perhaps the most important thing you can do is tell other people about why it's important to reduce GHG emissions and slow climate change. Start with your family. Then think about how your school and community could be encouraged to change.

You may even want to move up to a higher political level. Politicians need encouragement to make the necessary changes. You might ask them to expand public transit options, to set up recycling programs or to support alternative energies. Writing a letter to your Member of the Legislative Assembly or Member of Parliament will encourage them to press for changes. You can make a difference!



Key Points

- ★ The average Canadian produces about five tonnes of GHGs every year.
- ★ We create about half of our GHGs when we travel in cars, planes, snowmobiles or trucks.
- ★ We also create a lot of GHGs at home. Most of this comes from burning fuel to heat our homes. It also comes when we use electricity (if the electricity is produced by non-renewable energy).
- ★ GHGs are produced to make and transport most of the food and products we use in our day-to-day lives. By buying things made closer to home, using less and recycling more, we can help to reduce our GHG emissions.



Want to Know More?

Here are some websites filled with ideas about individual actions you can take to combat climate change:

- **Anti-Idling Toolkit:** http://oee.nrcan.gc.ca/idling/tool_kit/tool_kit.cfm – Background on why not to idle, and a program to help you conduct an anti-idling campaign in your school or community.
- **Climate Change Solutions:** www.climatechangesolutions.com – Ideas on what you, your community, and the businesses in your community can do. Lots of success stories, too.
- **Edmonton Bicycle Commuters:** <http://www.freenet.edmonton.ab.ca/ebc/winter.htm> – Tips on winter cycling.
- **Go for Green:** www.goforgreen.ca – Practical suggestions for outdoor physical activities that protect the environment.
- **Government of Canada Climate Change (What Can we Do?):** <http://climatechange.gc.ca/english/otc/> – A whole list of things you can do. Click on the links.
- **Natural Resources Canada (NRCan), Office of Energy Efficiency:** <http://oee.nrcan.gc.ca/English/> – Ideas to save energy, save money and reduce greenhouse gas (GHG) emissions.
- **Suzuki Nature Challenge:** <http://www.davidsuzuki.org/WOL/Challenge/10steps.asp> – A challenge to take personal action to slow climate change. Click on any of the 10 points, and find an explanation on why this action is important.
- **Taking Charge: Personal Initiatives:** www.davidsuzuki.org/files/Hornung_full.pdf – A detailed (51 page) pdf file filled with information and good ideas.
- **Your Yukon:** <http://taiga.net/yourYukon/col310.html> – Article on winter cycling in the Yukon.