

## CFUW Environmental Workshop – Action Plan - what you can do personally.

- The most obvious way to take individual action on climate change is to reduce the size of your **carbon footprint** – the total amount of greenhouse emissions that result directly and indirectly from your lifestyle.
- This will include increasing your **energy efficiency** at home and on the road, and you will save money in the process.

### **TRANSPORTATION**

Personal transport accounts for nearly a third of the typical person's carbon footprint.

- Most of us have to drive but we can drive more efficiently.
- Carpool – start with your next CFUW meeting.
- Drive at the right speed: Buy an energy efficient or hybrid vehicle
- Close to 17 million vehicles are registered in Canada today, and the average motorist can use about 2000 litres of fuel a year. Collectively, these vehicles produce 92 million tonnes of GHG emissions annually. Natural Resources Canada – The Office of Energy Efficiency (OEE) <http://oee.nrcan.gc.ca>

### **TOP 10 TIPS FOR SAFE FUEL-EFFICIENT DRIVING**

1. **Don't drive aggressively** – quick starts, hard stops and aggressive driving can increase fuel consumption by up to 37%.
2. **Drive at the posted speed limit** – increasing your cruising speed from 100 km/h to 120 km/h will increase fuel consumption by about 20%. Most cars are most efficient when travelling at speeds in the range of 45-80kph. At higher speeds cars gulp an increasing amount of fuel to travel the same distance – as much as 15% more for every additional 16kph.<sup>1</sup>
3. **Drive only when you need to** – leave your vehicle at home whenever possible by walking, biking, carpooling or taking the bus to nearby locations.
4. **Plan ahead** – If you have to drive, plan the most fuel-efficient route in advance. Make a list of errands you must do and do them in one trip.
5. **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.
6. **Measure the inflation level of your tires** once a month. A single tire under-inflated by just 56 kpa (8psi) can increase your vehicle's fuel consumption by 4%.
7. **Use cruise control** – on dry, flat wide-open highways, use cruise control, to help improve fuel efficiency by maintaining an even speed.
8. **Maintain your vehicle properly** – a poorly maintained vehicle consumes more fuel, produces higher levels of emissions, requires expensive repairs, and has a low resale value.
9. **Don't idle** – when you let your vehicle idle longer than 10 seconds, you burn more fuel than you would restarting the engine.
  - a) If every driver of a light duty vehicle avoided idling by five minutes a day, collectively over the year, we would save 680 million litres of fuel, over 1.6 million tons of GHG emissions, and \$646 million *annually* in fuel costs (assuming fuel costs are \$0.95/L).<sup>2</sup>
  - b) A recent study of Canadian driving habits and behaviour suggests that in the peak of winter, we each voluntarily idle our vehicles for five minutes a day, making a combined total of more than 75 million

<sup>1</sup> Henson, Robert *The rough Guide to Climate Change*. London, UK. Rough Guides Ltd. 2006: 323

<sup>2</sup> Natural Resources Canada – The Office of Energy Efficiency (OEE) <http://oee.nrcan.gc.ca>

minutes a day. This produces 1.6 million tons of GHGs per year and is equal to one vehicle idling for 150 years!

- c) Excessive idling can also be hard on a vehicle's engine. Since the engine isn't working at its peak operating temperature, fuel doesn't burn completely. This leaves fuel residues that can contaminate the engine oil and foul the spark plugs.

Why do we idle?	Canadians also idle their vehicles when:
<p>Warming up or cooling down a vehicle is the most common reason given for idling, in the winter and summer, respectively.</p> <p>Drive the vehicle to warm it up, rather than idling the engine (no more than 30 seconds of idling is needed on winter days to circulate oil through the engine).</p> <p>Use a block heater in winter to warm the engine before starting (turned on by an automatic timer 2 hours before leaving).</p> <p>Remember, overall, the best way to warm up a vehicle is to drive it at a more moderate speed</p>	<p>Waiting for passengers</p> <p>In the drive-through lanes of fast-food restaurants. (park and walk)</p> <p>Stopping at railway crossings</p> <p>Waiting to park</p> <p>Running quick errands</p> <p>Waiting to refuel or to have the car washed</p> <p>Stopping to talk to an acquaintance or a friend.</p> <p><i>In all of these situations, you can avoid needless fuel consumption and carbon dioxide emissions by simply turning off the engine.</i></p>
<p>In Denmark, a fine is imposed if drivers idle for more than 3 minutes.</p>	

**10. Safe driving** is fuel-efficient driving. Efficient Driving can reduce fuel consumption by up to 30 percent. In fact, if everyone in Canada reduced their vehicle fuel consumption by even 10 percent, we could collectively prevent over 14 000 tons of greenhouse gas (GHG) emissions from entering the atmosphere daily. What's more, reduced fuel consumption would also improve the life of your vehicle and reduce its operating costs.

**Hydrogen technology:** Ballard Power Systems Inc. [www.ballard.com](http://www.ballard.com)

**SAVE ENERGY**

**Light bulbs:**

- Close to 95% of the power that drives an incandescent light bulb goes to produce heat instead of light. Change to **Compact fluorescent** light bulbs in your entire house.
  - they generate less heat,
  - produce almost four times more light per unit energy.
  - They last ten times longer (buying fewer bulbs means saving emissions involved in making and shipping them).<sup>3</sup>
  - One light bulb saves 500 lbs. Of coal over life of bulb.<sup>4</sup>

**Halogen lights.**

- A subset of incandescent, twice as efficient as incandescent, but half as efficient as compact fluorescents.
- Turn lights off when you leave the room
- Organize your home to maximize the use of natural light (putting desks next to windows).
- buy energy efficient **appliances** – enerstar

<sup>3</sup> Henson, Robert *The rough Guide to Climate Change*. London, UK. Rough Guides Ltd. 2006:318.

<sup>4</sup> *National Geographic* August 2005

- Turn thermostat down at night to 17°
- Switch to a high efficiency **furnace**, especially heat pumps. (the Conservative government has removed incentive grants, so heat pumps are now costly.)
- Turn down temperature dial on **hot water tank** if you are away more than a few days. Put an insulation blanket on your tank to prevent heat loss.

#### EDUCATE YOURSELF AND TAKE ACTION.

- View *An Inconvenient Truth* video by Al Gore and make sure that your family sees it.
- Attend Al Gore's "Climate Project" to help train others to spread the word around the world.
- Sign up for the David Suzuki Nature Challenge. To date, more than 200,000 people have signed up to make simple changes to their lives in order to protect nature. [www.davidsuzuki.org](http://www.davidsuzuki.org)
- Just as worthwhile is **getting involved in the climate change issue with your employer or local community.**
- Raise your voice – we need new laws that will steer our country toward the most important solutions to climate change, cleaner cars and cleaner power plants. **Send a message to your elected officials**, letting them know that you will hold them accountable for what they do – or fail to do – about climate change.

#### The Prime Minister's Office

Email: [pm@pm.gc.ca](mailto:pm@pm.gc.ca)

Office of the Prime Minister

80 Wellington St. Ottawa, K1A 0A2

#### Contact your MP

<http://canada.gc.ca>. then click on "Resource Centre" to find out how to contact your MP

The Minister of the Environment, John Baird.

[baird@parl.gc.ca](mailto:baird@parl.gc.ca)

#### USE THE EARTH'S RESOURCES WISELY

- During summer and early autumn buy your produce from **local farms**. This supports your local economy and results in less CO<sub>2</sub> because transportation is reduced.
- **Organic food** eschews farming techniques that rely on petrochemicals and tends to result in lower emissions per unit of food. (But is not sufficiently low-carbon if it has been flown in.)
- Items, such as **coffee**, travel long distances but choosing items marked with a fair-trade label or shade-grown, will reduce the risk that rainforests are being chopped down.
- Eat **meat free** at least one day per week. Livestock belch and excrete a substantial fraction (perhaps 20%) of the world's methane emissions. And much of the Earth's rainforest destruction is driven by clearing land for livestock.
- **Compost** as much as possible. When food is buried in a landfill, it decomposes anaerobically and generates the potent greenhouse gas methane.<sup>5</sup>
- Use **cloth bags** when you are grocery shopping
- **Plants that clean the air in your home:** 1. Chinese evergreen, 2. Peace lily, 3 Arrowhead vine, 4. English Ivy, 5. Corn plant, 6. Devil's Ivy 7. Bamboo palm, 8. Rubber plant, 9. Gerbera daisy, 10. Florist's chrysanthemum.
- **Help save our forests:** use **paper** sparingly. Use both sides of a sheet of paper. Recycle paper. Do not use **paper towels** – use reusable cloths and throw them in the washing machine with your towels. Avoid **paper plates** at parties. Washing and drying together is good for friendships. Paper plates involve a lot of energy to manufacture and to deliver to the store – washing plates will take less energy.

#### WHAT YOUR COMMUNITY CAN DO.

- a) Planting trees gets rid of more CO<sub>2</sub> and gives us O<sub>2</sub>.
- b) If your province does not have a beverage container (deposit) collection system like B.C.'s lobby your Provincial Government to get one set up.
- c) Utilize methane from landfill sites to create electricity. In Kelowna they use the electricity to run the site and then sell excess electricity.

<sup>5</sup> Henson, Robert *The rough Guide to Climate Change*. London, UK. Rough Guides Ltd. 2006:313-326.



## Climate Change – Resources

### Books

1. Daily, Gretchen C. and Katherine Ellison. *The New Economy of Nature: The Quest to Make Conservation Profitable*.
2. Diamond, Jared. *Collapse: How Societies Choose to Fail or Succeed*.
3. Flannery, Tim. *The Weather Makers: How We are Changing the Climate and What it Means for Life on Earth*. Published 2005. (How we are changing the climate and what it means for life on earth).
4. Gelbspan, Ross. *The Heat is On*. (Exposes scientists who deny climate change is occurring and who is paying them to do it).
5. Gore Al. *An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It*. An (Book and video)
6. Henson, Robert. *The Rough Guide to Climate Change*.
7. Hillman, Mayer. *How We Can Save the Planet*. 2004. (Personal Action)
8. Lamb, Marjorie. *Two Minutes a Day for a Greener Planet – Quick and Simple Things you can do to Save our Earth*. Published by Harper Collins 1990.
9. McKinnon, James and Alisa Smith. *The 100 Mile Diet: a year of local eating*. (Eating Food Produced Within 100 miles of your home.)
10. Monbiot, George. *Heat: How to Save the Planet from Burning Up*.
11. *National Geographic*. September 2004 “Global Warning: Bulletins from a Warmer World” and *National Geographic* August 2005. “After Oil”.
12. Reay, Dave. *Climate Change Begins at Home*. 2005. (Personal Action)
13. Roseland, Mark. *Toward Sustainable Communities*. (University of British Columbia)
14. Steffar, Alex. *World Changing*
15. Stoyke, Godo. *Carbon Buster’s Home Energy Handbook*. New Society Publishers 'Learn to save \$17,800 and reduce carbon dioxide emissions by 73%.' [www.newsociety.com](http://www.newsociety.com)
16. Suzuki, David and Holly Dressel. *Good News For a Change: How everyday people are helping the planet*.
17. Vasil, Adria. *Ecoholic: Your guide to the Most Environmentally Friendly Information, Products and Services in Canada*. Published by Vintage Canada.
18. Wolverton, Dr. Bill. *How to Grow fresh Air*.

### REPORTS

- *Stern Review on the Economics of Climate Change*. [www.sternreview.org](http://www.sternreview.org)
- Intergovernmental Panel on Climate Change. [www.ipcc.ch](http://www.ipcc.ch)
- The Rocky Mountain Institute [www.oilendgame.com](http://www.oilendgame.com)
- *The Municipal Powers Report: Municipal By-laws and Best Practices for Community Health and Environmental Protection in Canada*. [www.sierralegal.org](http://www.sierralegal.org)

### WEBSITES

- There are recommendations for tackling the Pine Beetle problem on the BC Gov. website. [www.gov.bc.ca/pinebeetle](http://www.gov.bc.ca/pinebeetle)
- The David Suzuki Foundation [www.davidsuzuki.org](http://www.davidsuzuki.org). Lot of information about what can be done to combat global warming.
- Pollution Probe. [www.pollutionprobe.org](http://www.pollutionprobe.org)

- To calculate your impact on the climate in terms of the total amount of greenhouse gases you produce, visit: [www.climatecrisis.net](http://www.climatecrisis.net) or [www.nativeenergy.com](http://www.nativeenergy.com)
- Lots of resources on this Ontario site, especially for teachers. [www.ecoactionteams.ca](http://www.ecoactionteams.ca)
- Local Farms. [www.bcfarmfresh.com](http://www.bcfarmfresh.com). [www.eatlocal.org](http://www.eatlocal.org). [www.100miledietnainimo.com](http://www.100miledietnainimo.com)  
[www.farmersmarketsontario.com](http://www.farmersmarketsontario.com)

#### ENERGY SOURCES

- Canadian Association for Renewable Energies [www.renewables.ca](http://www.renewables.ca)
- Canadian Solar Industries Association [www.cansia.ca](http://www.cansia.ca)
- Canadian Renewable Energy Alliance. [www.canrea.ca](http://www.canrea.ca)
- Canadian Wind Energy Association. [www.canwea.ca](http://www.canwea.ca)
- [www.re-energy.ca](http://www.re-energy.ca). Information and projects – information for teachers.
- Solar Energy [www.sun-tech.com](http://www.sun-tech.com) and [www.sungen.ca](http://www.sungen.ca)
- Canadian Hydro. [www.canhydro.com](http://www.canhydro.com)
- Geothermal. [www.geoutilty.ca](http://www.geoutilty.ca) and [www.econar.com](http://www.econar.com)

#### RECYCLING

- The Mennonite Central Committee. [www.mcc.org/thrift/recycle](http://www.mcc.org/thrift/recycle)
- [www.charitablerecycling.ca](http://www.charitablerecycling.ca)
- [www.okanaganreuses.com](http://www.okanaganreuses.com)
- [www.technotrashglobal.com](http://www.technotrashglobal.com). We have a depot in Kelowna and there is one in Calgary, but you will probably have to contact this company to find out where their depots are located.

<u>Clothing websites</u>	<u>Eco-materials, Buildings, Household.</u>
Recut vintage clothing <a href="http://www.onandon.ca">www.onandon.ca</a> Eco-fashion <a href="http://www.twigandhottie.com">www.twigandhottie.com</a> Shoes – <a href="http://www.fluevog.com">www.fluevog.com</a> Coloured textiles – <a href="http://www.vreseis.com">www.vreseis.com</a> Recycle your old fleece – <a href="http://www.patagonia.com/recycle">www.patagonia.com/recycle</a>	Reclaimed wood: <a href="http://www.secondwindtimber.com">www.secondwindtimber.com</a> Green Works building Supply. <a href="http://www.greenworksbuildingsupply.com">www.greenworksbuildingsupply.com</a> BioBased Insulation. <a href="http://www.biobased.net">www.biobased.net</a> Zelfo. <a href="http://www.zelfoaustralia.com">www.zelfoaustralia.com</a> Shetkastone. <a href="http://www.shetkastone.com">www.shetkastone.com</a> Bamboo flooring. <a href="http://www.directbuy.com">www.directbuy.com</a> and others.

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