

# Section Four: You Choose, You Save

## How much CO<sub>2</sub> do British Columbians' emit?

*In B.C., our per-capita emissions from all sources are 15 tonnes. Approximately 4.5 tonnes of this is associated with individual actions such as driving and home heating. 4.5 tonnes of greenhouse gas would fill five average two-storey, three bedroom houses. Put another way, that's enough to fill about 90,000 party balloons.*

LiveSmart BC is a key element in the fight against climate change. It also has the potential to dramatically improve our quality of life for future generations by encouraging and supporting the development of environmentally friendly communities.

By making smart choices, we can save on energy, water and fuel consumption. We can reduce waste and get better value from our land, our limited natural resources and our tax dollars. This will not only reduce greenhouse gas emissions. It will also drive innovation to create new jobs and opportunities. It will reward smart choices and create the competitive advantages of higher productivity, lower costs, less waste and higher quality products.

Overall, the goal is for communities to meet human needs and provide the highest long-term benefit possible, with the least possible impact on our environment.

To reach this goal, the B.C. government will:

- work with partners to provide climate action education and resources
- support people to make informed choices
- highlight the individual and cumulative effects of climate action from a financial, convenience and environmental point of view
- facilitate individual action by providing practical tools and programs, as well as links to other useful programs and services.
- introduce LiveSmart BC with a new efficiency program to help reduce energy consumption in homes and small businesses. Subsequent phases will include a green work sites initiative and a LiveSmart small business skills and training program to help small businesses succeed in the new low-carbon economy.

There are currently many opportunities for British Columbians to choose ways to reduce their greenhouse gas emissions and save money. The list that follows outlines some of these opportunities. More will be developed in the near future.

## You Choose, You Save: Available Incentives

### ■ Save at home:

- PST exemption for ENERGY STAR qualified residential refrigerators, clothes washers and freezers (expires March 31, 2010).
- PST exemption for insulation designed to prevent heat or cold loss from hot water tanks, hot and cold water pipes, and ductwork.
- PST exemption for energy efficient residential gas-fired water heaters with an energy factor of 0.80 or greater (expires December 31, 2009).
- PST exemptions for: ENERGY STAR qualified windows, doors and skylights.

- PST exemptions for insulation designed to prevent loss of heat from a building, including weather stripping and caulking and window insulating systems.
- PST exemptions for ENERGY STAR qualified home heating equipment, including oil-fired forced-air furnaces, boilers, air-source heat pumps, and ground-source heat pumps.

#### ▣ **Save on the move:**

- Incentives valued to a maximum of \$2,250 offered through the Scrap-it Program to help retire older polluting vehicles from the road.
- Exemption from passenger vehicle rental tax for rentals of eight hours or less.
- PST exemption for electric power-assisted two and three wheel cycles\* and non-motorized adult-sized tricycles.
- PST reduction for electric motorcycles of 50% of the tax payable to a maximum of \$1,000.\*
- PST exemption for certain aerodynamic devices purchased for use on commercial motor vehicles.
- PST reduction for: hybrid electric vehicles of 100% of the tax payable to a maximum of \$2,000;
- PST reduction for eligible alternative fuel vehicles (e.g. operate on ethanol, natural gas or propane) of 50% of the tax payable to a maximum of \$1,000.
- PST reduction for 50% of the tax payable to a maximum of \$5,000 for alternative fuel shuttle buses and \$10,000 for alternative fuel passenger buses.
- PST exemption for purchase of and charges to install kits to convert motor vehicles to operate on natural gas or propane, or to operate exclusively on electricity.
- PST refund on parts and labour to convert shuttle buses and passenger buses to operate as hybrid electric vehicles or to operate on HCNG (a blend of hydrogen and compressed natural gas).
- PST exemption for non-motorized two wheel bicycles.

#### ▣ **Save on fuel:**

- PST reduction for certain conventional fuel efficient vehicles that meet the fuel efficiency criteria set out in the federal government's ecoAuto rebate program. The tax reduction is \$1,000, \$1,500, or \$2,000, and is based on fuel efficiency and vehicle type.\*
- PST reduction for hydrogen fuel cell buses of 50% of the tax payable to a maximum of \$10,000.\*
- PST exemption for biodiesel fuel, including the portion of biodiesel fuel used in a furnace oil blend, when used for heating or other non-motive uses.
- PST applied to coal and coke, except when purchased for use in a residential dwelling unit.

(\* Measures have a sunset date of March 31, 2011.)



- Biodiesel and ethanol classified as alternative motor fuels for all purposes and are exempt from tax.
  - Motor Fuel Tax exemptions for natural gas and alcohol-based fuels (blends of gasoline or diesel fuel and at least 85% ethanol or methanol) when purchased to propel a motor vehicle.
  - Motor Fuel Tax exemptions for the ethanol portion, including denaturant, of an ethanol/gasoline or ethanol/diesel blend if the ethanol portion is not less than 5% or more than 25% of the volume of the blend.
  - Motor Fuel Tax exemptions for biodiesel, including the biodiesel portion of any blend of biodiesel fuel and diesel fuel and pure biodiesel
  - Motor Fuel Tax preferential tax rate (2.7¢/litre) for propane purchased for use in operating a motor vehicle or stationary engine.
- **Save on other energy:**
- PST exemptions for eligible wind powered, solar powered, or micro-hydro powered generating equipment, including solar photovoltaic collector panels (can also be used for heating/hot water).
  - PST exemption for penstock equipment used for hydroelectric power generation.
  - Property (School) tax exemption for specified improvements to eligible wind power or hydroelectric power projects.
- **Save for your business:**
- PST exemption for production machinery and equipment for local governments for lower production and cogeneration.
  - Eligible intellectual property expanded to include green-related patents (patents with World Patent Office classifications related to power generation using forces of nature such as wind, solar and tidal).
  - Equity tax credit budget increased by \$5 million per year, with \$7.5 million of tax credit budget dedicated to clean technology.

(\* Measures have a sunset date of March 31, 2011.)

## LiveSmart BC Efficiency Incentive Program

Homes account for one-third of B.C.'s total greenhouse gas emissions and, with energy costs on the rise, everyone can benefit from steps to make our homes more energy efficient. The pie chart to the right shows how the greenhouse gas emissions associated with the way we live our lives are distributed per household.

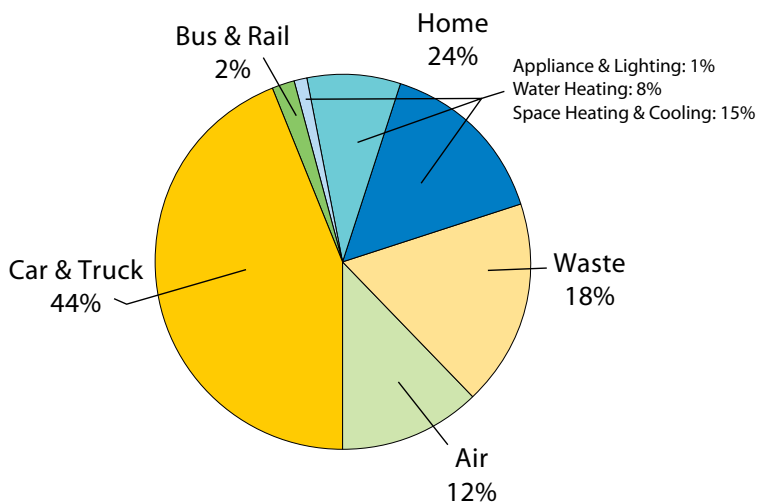
The first phase of LiveSmart BC is a three-year, \$60-million Efficiency Incentive Program that gives homeowners access to rebates for audits and energy efficiency retrofits.

As many as 40,000 homes will be audited through the voluntary program. Approximately 30,000 will be retrofitted over three years, along with 9,000 social housing units. Small businesses with annual electricity costs of less than \$50,000 will also be eligible for audit and retrofit assistance through the program.

In recognition of the different temperatures and costs of heating and cooling homes throughout the province, the LiveSmart BC Efficiency Incentive Program provides higher incentives for the interior and rural B.C. than it does for the south coastal region (comprised of the lower mainland and most of Vancouver Island). In this way, the Program equitably distributes savings throughout the province based on relative costs.

*The Province estimates that the LiveSmart BC Efficiency Incentive program will reduce carbon dioxide emissions in B.C. by 200,000 tonnes by 2012. By making our homes more efficient, we will reduce our overall energy demand which will also help keep our electricity costs down.*

**Per Household B.C. GHG Emissions (2005)**

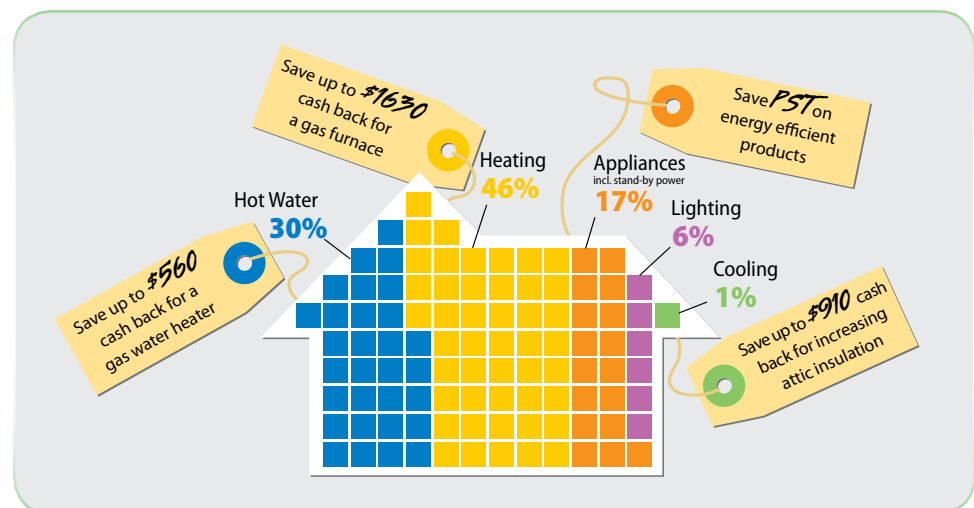


## The LiveSmart Energy Efficiency Program: A Step-by-Step Guide

The new LiveSmart BC program can help you cut your energy costs and reduce your carbon footprint. Here's how it works:

- Step One:** Contact a certified energy advisor and schedule an evaluation for your home. To find a certified advisor, call 1-800-662-6232 or go to [www.climateactionsecretariat.gov.bc.ca](http://www.climateactionsecretariat.gov.bc.ca)
- Step Two:** The energy advisor will inspect your doors, windows, insulation, heating and cooling systems and provide advice and information on improving your home's efficiency.
- LiveSmart BC will pay half the cost of the advisor's services. You will pay the other half – up to \$150. This will be refunded at the end of process if you make recommended improvements (see Step Five).
- Step Three:** Upgrade your home, and be sure to take advantage of the various rebates and incentives offered by the B.C. and federal governments, utility companies and, in some cases, manufacturers. The LiveSmart BC website includes links to incentive information.
- Step Four:** Have a follow-up evaluation to verify your energy savings and GHG emission reductions. You are responsible for the cost of this evaluation, which could be up to \$150.
- Step Five:** The energy advisor will process your incentive application, which will be forwarded to both the federal and B.C. governments. You will get two cheques in the mail to offset the cost of your energy retrofits.

LiveSmart BC will provide similar types of support for businesses. The program will eventually be expanded to assess not just energy use, but all activities that generate greenhouse gas emissions. For details, go to [www.livesmartbc.ca](http://www.livesmartbc.ca)



## What Can I Do to Reduce Carbon Emissions and Save Money?

One of the most common questions people have about climate change is “What can I do to reduce greenhouse gas emissions?”

The table below provides examples of the emissions reductions and financial savings that can result from some specific choices.

### Annual Savings from Carbon Emission Reductions

Source of savings	Carbon Tax Rate					
	\$10	\$15	\$20	\$25	\$30	
	Dollars					
Regularly tune up vehicle: tune and maintain proper tire inflation can reduce fuel consumption by 10%: vehicle with fuel efficiency of 10 L/100km.	Fuel	260	260	260	260	260
	Carbon tax	5	7	9	12	14
	<b>Total savings</b>	<b>265</b>	<b>267</b>	<b>269</b>	<b>272</b>	<b>274</b>
Drive one day less per week: vehicle with fuel efficiency of 8 L/100km.	Fuel	296	296	296	296	296
	Carbon tax	5	8	11	13	16
	<b>Total savings</b>	<b>302</b>	<b>304</b>	<b>307</b>	<b>310</b>	<b>312</b>
Walk to work: 5 kilometre commute and vehicle with fuel efficiency of 8 L/100km.	Fuel	250	250	250	250	250
	Carbon tax	4	7	9	11	13
	<b>Total savings</b>	<b>254</b>	<b>256</b>	<b>259</b>	<b>261</b>	<b>263</b>
Switch to transit: assumes distance to work is 25 km, vehicle with fuel efficiency of 10L/100km and a two zone transit pass at \$87 per month	Fuel	1,560	1,560	1,560	1,560	1,560
	Carbon tax	28	42	56	70	84
	<b>Total savings</b>	<b>1,588</b>	<b>1,602</b>	<b>1,616</b>	<b>1,630</b>	<b>1,644</b>
	Less transit cost	(1,044)	(1,044)	(1,044)	(1,044)	(1,044)
<b>Net savings</b>	<b>544</b>	<b>558</b>	<b>572</b>	<b>586</b>	<b>600</b>	
Replace inefficient vehicle: 20,000 km per year and replace vehicle with fuel efficiency of 12 L/100 with 10 L/100km efficiency	Fuel	520	520	520	520	520
	Carbon tax	9	14	19	23	28
	<b>Total savings</b>	<b>529</b>	<b>534</b>	<b>539</b>	<b>543</b>	<b>548</b>
Weatherize windows and doors: Weatherizing all windows and doors can reduce space heating costs by 5%.	Fuel	42	42	42	42	42
	Carbon tax	2	3	4	5	6
	<b>Total savings</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>
Install programmable thermostat: A 5° Celsius reduction for 8 hours per day reduces heating costs by 10%.	Fuel	85	85	85	85	85
	Carbon tax	4	6	8	10	12
	<b>Total savings</b>	<b>89</b>	<b>91</b>	<b>93</b>	<b>95</b>	<b>97</b>
Replace gas furnace: Replace a 65% efficient with a 95% efficient gas furnace.	Fuel	254	254	254	254	254
	Carbon tax	12	17	23	29	35
	<b>Total savings</b>	<b>266</b>	<b>271</b>	<b>277</b>	<b>283</b>	<b>289</b>

#### Assumptions:

- Gasoline price of \$1.30 per litre and natural gas at \$11 per GJ (not including fixed monthly charges).
- Carbon tax is levied at the equivalent of \$10 per tonne July 1, 2008 rising by \$5 per tonne each year.
- Vehicles driven 20,000 kilometres per year.
- Heating costs assumes 77GJ per year.
- Not included are savings in insurance costs due to vehicle replacement and change of use, parking and the federal income tax credit for transit.
- All fuel prices based on BC lower mainland.

Note: Carbon tax cost savings reflect revised gasoline tax rate from budget. Rate was reduced from 2.41 cents per litre to 2.34 cents per litre.