

How to save 10% on your carbon emissions in 2010 - your challenge!



Start with the big impact choices:

1. Fly less

when you holiday, especially avoiding short-stay long-haul trips around the planet. To see how much carbon an international flight emits compared to a domestic NZ car, train or bus journey, visit the free travel calculator at www.carboNZero.co.nz

New Zealand can offer great places to visit not too far from home. Make 2010 the year to rediscover your part of New Zealand, to spend time with friends, cultivate a garden and relax!

2. Drive less

on your own, especially on the short trips of a few kms in town where you could instead walk, cycle, take a bus or share vehicle use. Perhaps get to and from work without the car one day each week as an excuse to increase exercise, picking the nicest weather. Car engines burn more petrol or diesel per km when starting up and moving slowly on city streets and create more air pollution then.

Look back at your car WOF or garage maintenance records from early 2009 to see what kilometres reading was on the odometer then, to get an idea of how many km you traveled by car by the end of 2009. Set at least a 10% lower target for car use.

Then look at purchases:

3. Reduce the power bill,

or at least cut consumption so that expected further price rises will not hurt so much! Each 'unit' of electricity is one kilowatt of power demand for one hour of time (1Kwhr) and you get only four of these to a dollar, so they soon add up. A significant part of NZ power supply comes from burning coal and gas, so until we have all-renewable sources (geothermal, solar, hydro, tidal, etc), home electricity efficiency does help reduce the carbon footprint. Construction of dams and other energy plants is energy

intensive, in fuels, steel and cement, giving another good reason to reduce demand.

Energy *wasters* at home include:

- Not enough insulation above the ceiling, or under wooden ground-floors.
- appliances such as TV, washing machine, microwave, left on 'standby' overnight,
- filament light bulbs (compact fluorescent bulbs are 4x more efficient lighting, and also last longer. A filament light bulb is also a heater!),
- old fridges with thin insulation and leaky door seal, perhaps faulty thermostat,
- large plasma TVs which use 3x more power than LED screens,
- hot water tanks with thin insulation (add a tank jacket if not labeled 'A grade'),
- high flow showers - you only need 6 to 9 litres per minute, not 20+!
- draughts around doors and windows - use weather-strips and foam seals,

From previous bills, note your monthly power consumption in units during 2009 and compare with the bills as they arrive in 2010. See how many units you can trim off the total? Aim for at least 10%.

4. Switch winter heating fuels.

Move from coal, oil or gas (as all are global-warmers) to renewable wood or to mostly-renewable electricity, preferably with the added efficiency of a heat pump that transfers 3x more energy, from the air or soil source, into your home for winter heating than it requires in electricity to operate it. Now that's efficient!

Don't use this heat pump for summer cooling, however - it's far better for the planet to use shade, plus ventilation, to achieve the cooling effect. Otherwise you might be cooler inside but will be adding to global warming outdoors by wasting energy! Deciduous trees on the west of the house can help provide shade (or climbing plants on a frame, such as beans or grapevine, or sweet peas if there's no space for trees).

5. Eat more healthily.

Prefer fruit and vegetables from NZ to those which have been shipped or flown across the planet. And enjoy more seasonal variety in your cooking. Try meat free meals several times a week: seed, nut, grain and bean proteins are more carbon-efficient to produce. Meat and dairy production requires (per kilogram of food) high oil fuel and fertiliser inputs, winter stock feed inputs and electricity for water pumping. Cattle and sheep also produce significant amounts of methane gas from their upper digestive tracts - they burp it into the air. Meat production releases five times as much greenhouse gases per kg of food than producing grains or vegetable oils.

6. Buy less plastic junk, fewer metals, and less electronics.

Good quality that lasts has a lower carbon footprint over time than the short-life, throw-away plastic stuff and cheap clothing fashions (from both synthetic fabrics and cotton) with which we clutter our homes. To make things last longer, consider clothing repair, shoe re-soling, furniture renovation, and other creative re-use from internet purchases, swaps with friends or seeking Op Shop bargains. Don't be an electronics fashion victim! Consider upgrading computer equipment rather than scrapping it, and if you must abandon it, get it all recycled.

Throw less into landfill because you are still using these things, or if not needed, sell, swap or give it to someone else who *will* use it. See examples of who could take it at www.recyclingplus.org.nz (from Sustainable Otautahi Christchurch Inc.) Why waste expensive cupboard and floor space on storing this un-used clutter!

And consider your lifestyle's impact on natural systems:

7. Value water.

It takes lots of energy to heat water and then throw it away, using deep baths or spa pools, so develop the refreshing habit of a quick shower instead. If your shower chucks out more than 9 litres a minute (try measuring it), replace that shower head with a low flow model or get a flow restrictor insert to fit behind it.

In the garden, place watering systems so they don't spill onto paths and drives, and don't water in the heat of the day. Use a broom rather than a hose to sweep leaves off your drive - all that drinking quality H₂O had to be cleaned and pumped to reach your house in pipes, at considerable energy cost, so remember that cold tap water has a carbon footprint too!

8. Feed growing veges with compost.

Whether you make compost at home or separate kitchen and garden waste for council composting, you are helping to return materials to the natural cycle of decay. This releases essential nutrients including nitrogen and phosphorus for the living soil and crops. It's a sorry waste to send compostable kitchen scraps, peelings, prunings and grass mowings to landfill tips. Buried in the landfill, deprived of oxygen, they break down to make methane gas, which is a greenhouse gas far more damaging than carbon dioxide. This gas, unlike the solid waste, will eventually leak out of the tip, unless it's tightly capped! (Only a few waste tips have been engineered to collect methane gas.)

2010 is the year to stop being a methane-maker from your household's scraps.

If you do not have a garden, consider using EM Bokashi or a worm farm, and offer what you create in these methods to a community garden or a gardening neighbour, who can use it, in return for some vegetable produce! In Timaru, the idea is being taken further with an Edible Garden Group who link up people without gardens who would like to grow food with people who have unused land but no time or skill to garden: www.transitiontowns.org.nz/timaru Similar ideas feature at 'Out of our own backyards (Ooooby)' <http://ooooby.ning.com/profiles/blogs/what-is-ooooby>

9. Trim your house footprint.

The floor-size of New Zealand houses, per occupant, has been increasing. If you're a home owner and considering a move in 2010, do you need as much space or as many rooms at the next place? What if large houses fall from fashion because they are energy-guzzlers, just like the large SUV cars are doing right now?

Real value comes from houses that work well for their users, the ones that:

- are well insulated, to retain warmth in winter and to be cool in summer,
- gather the northern sunshine in winter and are able to store it overnight (but are shaded from mid-summer overhead sun),
- have sunny space for a vege patch and carbon-storing shade or shelter trees, rather than large areas of lawn to mow.

What's it adding up to, by later in the year?

10. Feel happier.

By December 2010 you are healthier - your rent or mortgage debt is smaller, you exercise more than you used to, you have sampled some seasonal recipes, made new friends from the car-sharing and swapping stuff and shopping at the farmers market. You've not been into a plastic cheap-junk shop for months...and you know that you are a small part of the global effort to prevent catastrophic climate change. Your children are talking to you again - after all, it's their future we were squandering in the old way of living.

More information at:

www.sustainableliving.org.nz for evening classes around NZ, & detailed action guides.

www.1010NZ.org (hosted initially by Celsius)

www.celsius.co.nz for action ideas, and you can post your own ideas there.

www.projectlitefoot.org for inspiration from NZ sportspeople, who last year cut carbon by 20%, and over 30% You can measure your own annual carbon impact there, to compare with the stars: <http://www.projectlitefoot.org/your-impact/>

Free monthly or annual carbon calculators in more detail at www.carboNZero.co.nz

Background calculations for carbon emission reductions at home - supporting a feature published in *Good Magazine*, Issue 10

<http://good.net.nz/magazine/ten/features/10-10/maths>

Make 'Earth Hour' (March 27th 2010) actions relevant all the year in NZ:

www.wwf.org.nz/take_action and see an annual footprint calculator on food, travel, home and material stuff from WWF-UK at either:

<http://independent.footprint.wwf.org.uk/> (based on UK energy generation and food production & has other differences from NZ, but interesting. Expresses impact in number of Planet Earths required if all lived at that level) or at:

<http://calc.zerofootprint.net> (based on Canadian non-metric data, but allows comparison with a NZ average for carbon impact. You have to register first)

Do ya bit for Auckland action inspirations on energy, water, travel, etc, coming soon from EcoMatters Trust: www.doyabit.org.nz

<http://hot-topic.co.nz/> well-informed blog site for daily updates on climate science and reviews of the policy debate.

www.transitiontowns.org.nz to help think positively about how different life would be without cheap fuel, and impact of changing weather patterns in a warmer climate.

Businesses may find it useful to visit NZ Sustainable Business Network who run *GreenFleet* <http://www.sustainable.org.nz/index.php?page=greenfleet> for efficiency in company vehicles and *Get Sustainable Challenge* company sustainability audits <http://sustainable.org.nz/index.php?page=gsc>

And see if your local Council offers a free Eco Design Advisor 'home check' visit:

www.ecodesignadvisor.org.nz