

12 Things You Can Do To Reduce Your Carbon Footprint

A Consumer's Guide to CO² Emissions

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This e-book is about some of the things you can do to reduce your carbon footprint. By now everyone knows that carbon dioxide or CO² emissions are the primary instigator of the so-called "greenhouse effect" that is causing global warming and climate change. Some of the main sources of CO² emissions are of course cars, buses, trucks, airplanes, home heating, power generation and factories; in fact anything that burns fossil fuels. There are other factors like land clearing for agriculture and city development, uncontrolled deforestation, forest fires and similar activities that release CO² into the Earth's atmosphere.



It has been said that global warming is a local problem, meaning that we all contribute to the problem and therefore share responsibility for doing things that will reduce, offset or eliminate our personal carbon emissions. This e-book lists 12 things that allow you, as a consumer, to do just that without having to make drastic changes in your lifestyle. In fact, you might find that turning some of the suggestions in this e-book into daily habits might actually save you some money.

It is perhaps important to mention that the things we can do fall into two principal categories:

1. Creating offsets to balance our CO² emissions; and
2. Not doing certain things in order to prevent or at least to reduce the amount of CO² emissions those activities would otherwise be creating.

This e-book will talk about both approaches to solving the global warming problem.





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Some Definitions



Above: More and more companies and consumers are looking for strategies to offset their carbon emissions.

What is a carbon offset? A carbon offset is any activity that sequesters, removes or eliminates the CO² emitted by another activity. The idea is that the resulting balance creates a carbon neutral condition. In other words activity A produces CO², but activity B sequesters or absorbs that CO². Historically, natural processes on our planet have sequestered or eliminated the CO² that was being emitted. However, with the dawn of the industrial age and a growing human population, natural systems have been falling behind while man-made CO² emissions have been increasing as a percentage of our atmosphere, causing the “greenhouse effect”.

What does carbon sequestration mean? Carbon sequestration is the process by which organic, chemical or mechanical activities absorb CO² from the atmosphere and hold the carbon for a period of time to prevent its release back into the atmosphere. For example, organic sequestration is performed by trees, which use the carbon to build their woody biomass while releasing oxygen back into the atmosphere. Plants and algae do the same, but on a less long term basis.



Above: A car emits CO₂ and a tropical tree sequesters that CO₂.



Above: Alternative energy sources can replace fossil fuels.

What does CO² reduction mean? As the name implies, CO² reduction is the process by which CO² emissions are reduced, hopefully to more manageable levels. Common reduction strategies include switching from fossil fuels to alternative energy sources such as solar or wind power, or by riding a bicycle instead of driving a car, or by changing one's consumption habits in such a way that less CO² is being emitted. This e-book will discuss strategies that involve carbon offsets, CO² sequestration and CO² reduction activities.



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The First Thing You Can Do

ONE. The first and most obvious thing you can do is offset the CO² emissions produced by your vehicle, in other words “*Make your car carbon neutral!*” It will be at least another two decades before cars with fuel efficient zero emission engines, hydrogen propelled transports, or electrical cars become affordable alternatives to today’s vehicles. Besides your home heating or air conditioning emissions, your car is probably the biggest CO² culprit you own. The EPA (“*US Environmental Protection Agency*”) estimates that the average North American vehicle emits 12,100 lbs or 5,488 kg of CO² every year.



Above: The soil is ploughed to a depth of 2 feet for the planting of tropical trees at a plantation in Vichada, Colombia, after which lime, boron and fertilizer are added.



Above: Tropical trees like *Acacia mangium* grow quickly, and are therefore excellent at sequestering CO², besides fixing nitrogen in the soil. The CO² Tropical Trees program uses this species a lot.

The most practical way to offset your car’s CO² emissions is by funding the planting of tropical trees. The average tropical tree absorbs 50 lbs or 22.6 kg of CO² every year, so it takes just under 250 tropical trees to balance your car’s annual CO² emissions. The cost of doing this is surprisingly affordable. For the annual cost of a single fill-up at the pumps (\$85) you can make your car carbon neutral by having 250 tropical trees planted. A good example of this is the *CO² Tropical Trees* planting program with a web site at <http://www.co2tropicaltrees.com>.

It is worth emphasizing that the most efficient way of offsetting your car’s CO² emissions is with tropical trees. Tropical trees account for 95% of all tree-based carbon sequestration on the planet, whereas all other forests account for only 5%. The reason for this is that tropical trees grow year round and are broad-leafed. They are also mostly hardwoods with much greater density than their softwood counterparts, meaning they have much greater quantities of carbon in their woody biomass. Another option to consider is tropical tree investing, which makes you money while sequestering your carbon emissions. For more info go to <http://www.myreforestation.com>.

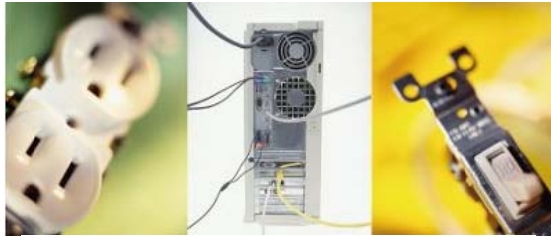


Above: Tropical trees are a proven money maker.



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Second, Third and Fourth Things You Can Do



TWO. This next suggestion is a money saver, requiring only a small lifestyle change. Don't just turn off, but actually unplug any electronic or electric gadgets you own when they are not in use. Most people don't realize that they continue to use electricity even when they are not turned on. One easy way of doing this is by having groups of items, like your television, surround sound and DVD player, or your computer, speakers, printer and router all plugged into a single power bar that is easy to unplug. You will be amazed how this will reduce your monthly power bill and carbon footprint.

THREE. Most North American homes are over heated. Why not turn down the central heating slightly by just 1° or 2° degrees C or 2° to 4° F? In the alternative, get an automatic thermostat timer that keeps the house cooler during weekdays, when you are away at work, and at night when you are in bed asleep. Regular maintenance of your home heater will increase its efficiency, saving you money as well. If you feel chilly around the house, it is often not the set temperature, but rather your body. Try wearing a light sweater or warmer shirt. All of the above will cause a significant reduction in your heating bill.



FOUR. One appliance we tend to forget about is our hot water heater. If you turn down the water heater temperature setting by just 2° C or 4° F degrees you will reap considerable savings. One device common in developing countries you may wish to adopt is a water heater timer. It allows you to set the time for the tank to be active, like from 5 AM to 8 AM when you get up to go to work, and again from 5 PM to 10 PM when you come home and before going to bed. Since water heaters are insulated, the rest of the time the tank sits idle, saving you money and reducing your carbon footprint.



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Fifth, Sixth and Seventh Things You Can Do

FIVE. This point will seem like a no-brainer as well, but amazingly few people do it. Fill your washing machine and your dish washer with a full load every time you use it. It uses just as much electricity to wash a half empty load as it does a full load. Setting your washing machine to perform an extra spin cycle is also good economy, as it will reduce the amount of time your dryer operates. Remember that washing machines only use 110 volts, while dryers run on 220 volts, so they are power hogs. Needless to say all of the above will save you water, electricity, and detergent, again reducing your carbon emissions.



Look for this rating when you buy



SIX. This piece of advice will pay for itself in the first year you do it. Replace any fridge and / or freezer you own that is over 15 years of age. Modern fridges and freezers come with “A” energy star efficiency ratings, so replacing the old with the new will have an instant effect on your power bill. For example, my old fridge drew 1800 kilowatt hours (kwh) a year, whereas my new replacement fridge, a model that is essentially the same style and capacity as the old one, only draws 675 kwh a year. That is an amazing difference.

SEVEN. This next point may not be possible in your area, but it is worth investigating. If you can sign up to a “green” energy supplier, one that supplies electricity from renewable sources like wind, solar and hydroelectric power, then your electricity carbon footprint will be almost zero. In fact, even if your power company is not a “green” supplier, find out if you can sell power back to them. Homes with solar panels mounted on the roof can sell electricity into the grid during the day, and draw power at night, significantly reducing the monthly power bill. This can be more cost effective than you think, as expensive storage batteries are not needed.



Above: More and more power companies allow consumers to sell alternative energy power back into the grid.



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Eighth, Ninth and Tenth Things You Can Do



EIGHT. While it is popular to urge people to use bicycles or to walk, it is often not feasible. The reality is that kids need to be picked up or taken to their hockey or baseball practices, groceries and shopping need to be done at locations that are far from home, and work often requires quick access to a vehicle. However, there are some small changes you could make that can go a long way. For example, it is ridiculous to take the car to the corner store, so either walk or cycle for short journeys. In public buildings use the stairs. It won't kill you to avoid the escalator or even the elevator for a couple of floors. Some malls are even turning their escalators off to reduce their carbon footprints, so why not play along?

NINE. People fail to approach their employer with the next suggestion, but it can add up to significant savings. Most homes are wired to the internet, VoIP phones allow unlimited long distance dialling and work places have virtual private networks (VPN's), so why not see if your employer will allow you to work from home 1 day a week? Not using your car to and from work that day cuts CO² emissions and saves you the cost of fuel. In many cities the average commute is an hour each way, so you might actually spend more time on the job, which is sure to please your boss. People find that a regular day away from the office is a great way to finish pending projects.



Above: Working from home can actually save you money and reduce your carbon footprint.



TEN. This one is a biggie. Don't buy over packaged products. The cost of the packaging often seems to exceed the value of the product inside it. All that plastic was made in a factory emitting CO² and causing more trucks to be on the road to deliver all that fluff around the items. As a consumer you can act by not buying products that have ridiculous packaging. In fact, why not start taking your own durable canvas bags with you when you go shopping, reducing the number of plastic bags that end up in landfills, or contaminate our oceans.



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Eleventh and Twelfth Things You Can Do

ELEVEN. This one is another idea that may take some getting used to and that requires a definite lifestyle change, but does reduce your carbon footprint significantly. It is probably a lot healthier for you, too! Buy organic and buy local. The reason one should buy organic is because the chemicals used in modern agriculture pollute our water supply, hurting marine life, and require a lot of energy to produce. It isn't hard to understand that buying local foods reduces the time it took to drive them to market, and less fuel used means less CO₂ emitted.



Above: Would you rather have your coffee table made out of rainforest wood or plantation wood?

TWELVE. When doing a project, use wood from tropical tree plantations that are replanted with fast growing hardwoods. This guarantees that CO² was removed from the atmosphere. Using wood is a good way to keep CO² sequestered. Compare this with metals, that had to be mined, releasing CO², or with fiberglass, cement or plastics, all of which were produced by factories emitting CO². Note as well that if you use plantation wood, then existing forests are not being chopped down. Deforestation is a serious cause of CO² release into the atmosphere. For more information check out <http://www.myreforestation.com>

BONUS. Properly inflate your car tires and change the air filter in your vehicle. Improperly inflated tires waste as much as 250 lbs of CO² a year and may cost almost \$800 in additional gasoline money. Add to this the fact that an old air filter causes you to waste as much as 800 lbs of CO² a year, since your engine operates less efficiently. Replacing your air filter can save you \$130 a year. Check your tires and air filter at least once a month. Garages like to recommend frequent oil changes, but frankly you can usually squeeze another 1,000 KM or 600 miles out of the last oil change without affecting your car.





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Conclusion to 12 Things You Can Do

CO₂

There are no doubt many other things you can do to combat global warming and climate change. Many of them are relatively simple, like most of those included in this e-book. Others are a little bit more costly, but have a huge effect on the well-being of our planet. We all recognize that carbon is a key component of many natural life cycles, including our own, but the issue remains that right now atmospheric CO² is too much of a good thing. The greenhouse effect is real and poses eminent danger to low-lying nations, many economies and global food supplies. To repeat, global warming is a local problem that has to be addressed with local action.

Many of the suggestions in this e-book concern carbon reduction strategies. But perhaps the most important thing you can do is to take responsibility for some carbon sequestration. There is frankly no better way of doing that than funding the planting of tropical trees. If you can make your car carbon neutral at the same time, then it becomes a win – win for everyone. Tropical trees do more than sequester carbon, they also provide habitat and food to much of the planet's endangered wildlife, and wood for human use in construction, furniture, pulp and paper and fuel, so we urge you to take effective and affordable action today!



Above: Go to <http://www.co2tropicaltrees.com> and help us plant more tropical trees.



<http://www.ales.ualberta.ca/>



<http://www.omacha.org>

Planeta Verde Reforestación S.A. is proud to be associated with our partners to the left. We hope you have enjoyed this e-book and that you will pass it on to others. If you would like to contact me, Dexter Dombro, then please call me from the USA or Canada at **780-628-7281**. Send e-mail to dexter@co2tropicaltrees.com. You can also reach me internationally by calling my land line number in Costa Rica at **+506-2273-3093**.