



Get Energy-Smart NOW

– Steps you can take to take control of YOUR
energy use

John Knox

2011



Be the Difference that makes a Difference

Everything we do leaves a permanent mark on the atmosphere – making coffee, driving, buying food, watching television, using computers, flying – it all contributes to the amount of carbon dioxide (CO₂) we put into the atmosphere and adds to the issues we face with global warming.

So what can we do? Stop buying food? Stop drinking coffee? (For most coffee drinkers, that could be a major difficulty and nobody wants to see what happens when Climate Change forces people into caffeine withdrawal! Things could get ugly.) There are, however, a lot of practical things we can do right now to reduce our individual carbon footprint. (Don't worry, you can keep your coffee.)

Australia has the largest GreenHouse Gas emissions per capita of any of the developed nations. Victorians are the worst emitters in the world (at over 1200kg per megaWatt hour [MWh] for their electricity) and it's everyone's responsibility to live within their carbon budget for the benefit of future generations.

Many people believe that Climate Change is such a big issue that nothing they can do will make a difference and that there is little that any one person can do that matters. This is a fallacy, a single person, by their actions, can have a profound effect upon others. Through the multiplier effect, they can be instrumental in affecting the actions of others and as well as their own, can reduce others', impact on the environment.

It is said that energy efficiency measures alone can reduce an average Australian household's energy use by up to 30%.

It's not the sexiest answer to Climate Change but energy efficiency works! Evidence suggests that efficiency can make a huge contribution towards stabilizing energy prices and reducing greenhouse gas emissions – **should we choose to fully develop it.** You can reduce your "carbon footprint" significantly with just a few simple changes in your behaviour and/or changes to your home and **it needn't cost you the earth!**

Here are some things you can start to do today to reduce your household carbon emissions:

✚ The first thing you can do is do (or have done) a Home Sustainability Assessment – this will give you a baseline for current energy use; enable you to identify the big energy using areas in your home and indicate where the most cost effective changes can be made. NB. The federal government used to provide these free-of-charge

as part of the Green Loans Program but they have recently closed this program. ☹

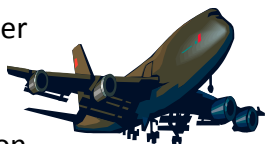
*Hint: If you want to enlist the aid of an HSA, you can check with the Association of Building Sustainability Assessors <http://www.absa.net.au>
Phone: 1300 889 438 or
Email: admin@absa.net.au*



✚ As far as most people are concerned, driving is the single largest contributor to their carbon footprint (unless you fly a lot but that's another issue entirely).



The simplest way to cut back on carbon emissions from driving is to drive less. Working near home helps but isn't practical for everyone. Walk, use your bike or public transport for most of your travelling needs — it's a great way to get exercise, meet your neighbours and reduce your fuel bills. Drive a fuel efficient vehicle / drive smoothly (keep acceleration & braking to a minimum — it's better for your car too!) / practise courtesy on the road ("Courtesy is catching") you'll arrive almost as fast and in a much better state of mind. Reduce the number of trips you take. Instead of running random errands throughout



the week, make one day errand day and get it all done at once. See if your workplace will allow you to work 4 x 10 hour days instead of 5 x 8 hour days — it will cut your travelling down by 20% and possibly make those trips outside peak hours. Tele-commute and video-conference where possible. Get your kids to walk, ride a bike or catch public transport to school — it helps build independence.

Action: encourage your supermarket to provide cheap or free home deliveries. At the very least, consider shopping with your neighbours so that you can car pool.

✚ Switch appliances off at the mains when they are not in use (appliances that rely on timers e.g. video recorders exempt) — standby loads account for up to 10% of energy use in the home!



"If it's got a light on, it's not off — turn appliances off at the power-point"

Vehicle efficiency calculations

Assumptions:

1 occupant per car weighing \leq 100kg (assume 100kg)

*Vehicle weight \geq 1000kg
(assume 1000kg)*

Maximum efficiency of internal combustion engine/drivetrain 25%

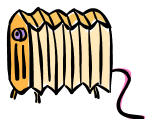
With these assumptions the efficiency of moving a person from A to B would (as a maximum) be an order of magnitude less than the vehicle efficiency - 100kg/1000kg i.e. 2.5% for a single occupant vehicle

(N.B. These figures may be rough and ready but are indicative.)

*Moral: to get best efficiency when using your car, consider car pooling
— this multiplies the vehicle efficiency*

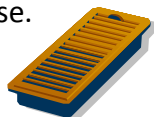


- ✚ For every degree above 18°C that you heat your home in winter, it will cost you 10% more on your energy bill and, for every degree below 26°C that you cool your home in summer, the same factor applies. Zone your house – i.e. close living areas off from utility areas and only heat or cool your living areas. Bedrooms don't require heating: you sleep better in a cool environment – that's why we have so much trouble sleeping on hot summer nights. In winter, consider dressing for the season (put a jumper on if you're cold) and in summer



consider using a fan before turning the air conditioner on; you will save lots of energy and really notice the difference on your bills. Heating/cooling accounts for about 30% of domestic energy use.

Hint: if you have ducted heating/ cooling, get the ducts checked for 'leakiness' – you can lose up to 50% of your heating/cooling through leaky or poorly insulated ductwork – this is just a waste and costing you dearly! Turn the registers off in all other areas.



- ✚ Make sure you have adequate insulation installed in your ceiling. Insulation has got a bad rep lately but this is undeserved – it is still one of the best things you can do to reduce your energy bills in the home AND make your home environment more comfortable.



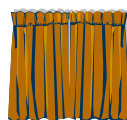
Hint: If you are renovating, consider putting insulation in your walls as well.

- ✚ Install draught proofing kits on doors and windows (readily available from your local hardware store). Why let all that costly heat out? Draught proofing is generally inexpensive and reaps huge rewards in terms of return-on-investment. Installation in most cases is easy D-I-Y.



Interesting fact: It has been estimated that, for the average Australian home, if you were to add together all the leaks in the building fabric, it would be equivalent to having a 1m² hole in the wall!!

- ✚ Install heavy lined drapes and pelmets (pelmets are back!) to reduce heat loss in winter and they can even help to keep your house cooler in summer by preventing your home heating up in the first place.



Hint: In summer, if you keep your curtains closed during the heat of the day, you will reduce the amount of heat entering your home but note, it is preferable to shade your windows from the outside.

.....and, if you're the handyman type, you can get designs for pelmets [here](#)

- ✚ Don't use your dryer unless you really must. Use your solar clothes drier instead – the washing line. In winter when it's wet, use a clothes airer in your living areas – this will also re-humidify the air and assist anyone with respiratory ailments.



Tip: if you do use the dryer, clean the lint filter after each use – it improves the efficiency and avoids fires.



- Be a responsible consumer. Everything we buy takes energy and resources to produce. Look for products that reduce the impact on the environment by reduced packaging, using recycled or renewable materials and being locally produced. The latest 'bling' may not be the best 'thing' for the environment – if it ain't broke, don't replace it. Buy quality products – they generally last longer and there is a better chance that they will be able to be serviced....and, if you don't **REALLY** need it, don't buy it in the first place.

Tip: it makes good sense – over 85% of all goods purchased find their way to landfill within 6 months! See www.storyofstuff.com



- When replacing appliances, make sure you pick the highest energy star rating you can – it may cost a bit more initially but the savings in energy over the life of the appliance should more than compensate. Check the standby power of the appliance – this can make a big difference to its lifecycle cost. *Hint: buy the smallest appliance that will do the job required – any larger and it costs you extra for the appliance itself as well as extra to run it. This goes for vehicles as well!*



- Boil only as much water as you need for your beverage – it uses a lot of energy boiling water and any excess will only return to room temperature.



Tip: you get your cuppa faster too!

- Use a AAA rated shower head and take shorter showers to reduce your water heating requirements. Four minutes is the most you should need.



Tip: This also saves water in this, the driest continent on earth. You can even get a lever that switches off the shower while you lather up – the "Every Drop Shower Saver"

- Fit flow restrictors/aerators to taps to reduce (hot) water use. *Info: These give the perception of the same water flow while using less water per minute.*



- Recycle: Every piece of waste that gets diverted from landfill reduces green-house gas emissions. Find creative ways to recycle by re-using things instead. The re-using of the valuable materials that made up the product or packaging reduces the demands on mining and refining and saves enormous amounts of energy. *Tip: find out if your council/shire has an e-waste collection service.*



- Having lights on when you're not in the room is an obvious waste – get the kids involved in making sure lights are off.and the time to switch your lights to energy efficient globes is not when they blow, it's now – you'll **save** about 80% on your lighting bill.



Info: more mercury is released by burning coal to produce the extra energy to drive incandescent lamps than is contained in CFLs!



✚ Buy local food — consider farmer's



markets; **grow your own** – you can't get it any



fresher. Buy fresh fruits and veggies as much as possible. Check to see where they're from. The food we eat contributes a great deal to our GreenHouse Gas (GHG) emissions by, amongst other things, packaging & transporting all over the globe. By growing your own or buying food from local producers you not only support your local community but lower the "food miles" involved. Consider, if you're not already a vegetarian, making one day a week meat-free – say meat-free Monday. Don't forget to

take your own bags. Reusable shopping bags are more popular than ever. The trick to using re-usables to reduce your carbon footprint is remembering to use them.



Make a shopping list and put "Remember my bags" at the top. Shopping lists also focus your mind on what you need; helps avoid those impulse purchases and, perhaps, even return trips for things you forget.

Tip: buy in bulk. Less packaging means less waste. Organise a bulk buy with neighbours– it builds community! You can portion the items out when you get home and save a bit of money as well.

A final word.....

By committing to do *your* bit, you can, each and every one of you, be a part of a much larger whole.

Energy prices have risen and they are set to rise more. Many of us are feeling pain in our energy bills. Reducing your energy use by using energy **smarter** will help you **keep** more of **your money** in your pocket – **wasting energy is wasting money**. Efficiency is the energy we don't use. It may not be as visible or as romantic as a solar farm or wind turbine but it's a vital, under-utilised, clean energy resource, with a huge potential to help address Climate Change.

Reducing your individual carbon footprints through using energy smarter (energy efficiency measures) and, just as importantly, **encouraging others to do likewise**, will help reduce the nation's overall carbon footprint to a more manageable level and buy us time to implement a low carbon economy.

If you have any good ideas about living more sustainably and reducing your carbon footprint, share them with others – our children will thank you.

Let's do it and do it now!

Go to my website now! And sign up to YOUR 3 actions:
<http://www.ridethetalk.com.au/actions/choose-your-actions/>

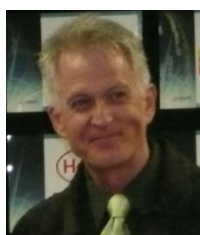


P.S. While this last suggestion is unlikely to save you money, rest assured that switching your household energy supply to 100% Accredited Green Power will mean you can make all your electricity carbon neutral and, thereby, will be encouraging investment in renewable energy sources such as wind and solar power. The energy is audited so you can be sure that there is renewable energy produced to supply what you're buying. Visit: www.greenpower.gov.au or call the GreenPower hotline on 1300 723 588. It's cheaper than you might think.



For information on how Australia can be using Renewables for 100% of its stationary electricity generation, check out <http://www.beyondzeroemissions.org/>

Now most of what I've written about is not rocket science but it does makes good sense especially when you consider that the health impacts from burning coal are so frightening! <http://www.abc.net.au/unleashed/42476.html>



John Knox



☆ www.ridethetalk.com.au

☆ www.planbig.com.au/ride-the-talk

facebook : <http://www.facebook.com/group.php?gid=103222063046706>

Follow me on **twitter** : @ridethetalk



Behind the ride

In 2008 at the age of 52, concerned about Climate Change, I returned to school to study Renewable Energy. During the course of that course, I discovered that the efficient use of energy is the low hanging fruit in the battle to address Climate Change, since energy use is at the heart of the production of GreenHouse Gases (GHG). At the end of those studies, I went to work for the Alternative Technology Association – a not-for-profit member organisation; whose members have been “doing sustainability” for the past 30 years.

In February of 2010, I decided I needed to do more to protect my children’s future and I decided to take time off work to take the message of smarter use of energy to communities around Australia. (With rising energy prices, energy bills are a pain point for many people these days so I expected this would help bring audiences.) In order to make my presentations as persuasive as possible, I enrolled in expensive Platform Speaking skills training. After all, there is little point in having a nest-egg if your children have to fight to survive.

As a long-time cycle commuter, I decided to do this talking tour by bike – as this is the most energy efficient form of transport known to mankind. I had the knowledge; I had the passion; I had the bike! Many people & governments talk the talk; lesser numbers walk the talk; I decided to ‘ride the talk’.

*My presentations are engaging, interactive, entertaining, and inspiring and call for people to take specific actions they can adopt **now** to allow them to use energy **smarter**.*

www.ridethetalk.com.au