

# HOW TO REDUCE our ecological footprint AT HOME

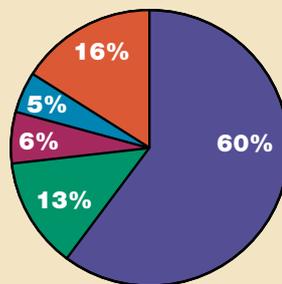
*“Human beings are appointed by God as stewards of the earth to cultivate and protect it. From this fact there comes what we might call their ‘ecological conversion’, which in our time has become more urgent than ever.”*

**Pope John Paul II – Aug 2000**

*“We need to ‘convert’ the model of global development, required not only due to the scandal of hunger but also by environmental and energy emergencies. Yet, every person and family can and must do something to alleviate hunger... by adopting a lifestyle and consumption compatible with the safeguarding of creation and with criteria of justice...”*

**Pope Benedict XVI – 12 Nov 2006**

Climate change presents disturbing threats to future generations, and many of us are deeply concerned about what we can do personally to reduce the threat of global warming. By implementing some simple measures, we can all minimise our ecological footprint, saving money and helping to preserve our wonderful planet for generations to come.



**Average household energy consumption division**

- Heating and Cooling (including water heating)
- Other electronic appliances
- Lighting
- Cooking
- Refrigerators

Households use a third of total energy consumption, with the average household responsible for almost 11 tonnes of CO<sup>2</sup> annually. We are currently using too much energy wastefully, and our consumption mentality needs to give way to one of sustainability. We can all become far more efficient in the way we use energy, and we can do so easily. By implementing a few simple ideas, you may be surprised at how much money and energy you can save.

Most of the energy we use at home is consumed in heating and cooling, for hot water and running our appliances. The first step to reduce our impact on the environment is to change to a ‘Green’ energy provider, which uses alternative energy sources that do not burn fossil fuels. Next, consider these ways to reduce our demand for energy.

## Heating

According to Sustainability Victoria, heating and cooling are responsible for 59% of the energy consumed by Victorian homes, equivalent to releasing 65,000 balloons of CO<sub>2</sub> into the atmosphere. Our homes can be kept warm naturally by ensuring that our insulation is effective, sealing gaps and cracks, and keeping doors, windows and blinds firmly shut. Proper insulation can limit heat loss by up to 35% in winter.

- ⊙ Set thermostats between 18-20°C. Each increase of 1°C accounts for 10% of heating energy consumed.
- ⊙ In heated areas, make sure that all doors and windows are firmly shut.
- ⊙ Closing blinds and curtains, especially at night, will save energy and keep heat in the home. Zoning the home by closing doors and windows in the areas being heated are also great efficiency techniques.
- ⊙ Service all heaters, by making sure the filters are clean and dust free. This will make sure your heating appliances are running at their optimum output.

## Cooling

- ⊙ To ensure your insulation in summer is fully effective, it must be used in conjunction with good window shading, such as verandas, pergolas or fixed awnings. Allowing the sun entry into windows facing north during winter, and keeping the sun out during summer, will keep your home at a more comfortable temperature.
- ⊙ On hot days, close all blinds, curtains, windows and doors.
- ⊙ Use fans instead of air conditioners when possible.
- ⊙ Set air conditioners at no less than 26°C.

## Water heating

Hot water heating is responsible for around a third of home energy usage and costs on average \$300 dollars a year.

- ⊙ Fix dripping taps as soon as possible.
- ⊙ Use at least 10mm insulation around external water pipes to reduce heat losses.
- ⊙ Regulate shower temperatures by turning the hot down rather than the cold up.
- ⊙ Fit AAA-rated showerheads. AAA-rated showerheads can save up to two thirds of hot water, reducing water and energy consumption.
- ⊙ If going away for extended periods, make sure that you turn off your hot water system.

## Laundry

Energy used for washing and drying clothes can cost families up to \$170 per year, and by implementing a few simple measures, this bill can be drastically reduced.

- ⊙ Wash clothes using cold water. This is good both for the longevity of your clothes and uses much less energy.
- ⊙ Refrain from using a clothes drier, as they are highly energy intensive. Hang your clothes out to dry or hang them over your ducted heating vents in the home.
- ⊙ Use only full loads of washing.
- ⊙ Front load washing machines use up to 40% less water and 50% less energy than top loaders of the same capacity.
- ⊙ Clean lint from washing machines and driers after every use.

## Living Room

Appliances are a major emitter of greenhouse gases, and can cost households up to \$500 a year.

- ⊙ Standby power contributes to 11% of residential energy consumption. By turning off appliances at the power point, 17,000 balloons of greenhouse gas emissions per household can be saved.
- ⊙ When going on holidays, turn off all appliances at the power point.
- ⊙ When purchasing new appliances, make sure the Energy Star label is as high as possible.

## Kitchen

- ⊙ Only run the dishwasher when full.
- ⊙ Use the economy cycle on your dishwasher and select the lowest water temperature possible.
- ⊙ Remove as many food particles you can before placing dishes in the dishwasher.
- ⊙ Thaw frozen foods before cooking.
- ⊙ Check that the seals on your oven are in good condition.
- ⊙ Use small appliances where possible. Microwaves use less energy than ovens, and toasters use much less energy than grillers.

## Refrigerators and freezers

The fridge uses the most energy of all household appliances, costing on average \$140 a year and emitting 29,000 balloons of greenhouse gases.

- ⊙ Set the temperature of your fridge between 3-5°C and freezers between -18°C and -15°C.
- ⊙ Make sure the seals are tight fitting.
- ⊙ Clean the coils at the rear of the fridge at least once a year to maximise its efficiency.
- ⊙ Place your fridge and freezer in a cold environment, away from direct sunlight, ovens and stoves.
- ⊙ If you have more than one fridge, switch it off when not being used.

## Lighting

- ⊙ The replacement of incandescent light bulbs with compact fluorescent light bulbs brings substantial energy savings. The initial higher expense is quickly recouped through energy savings of up to 75%, and they have a greatly increased life expectancy with 8-10,000 hours compared with 100 hours of incandescent lighting.
- ⊙ Use lamp shades that are light in colour to limit the absorption of light.
- ⊙ Lights that use multiple globes are much less efficient than those with only one.
- ⊙ Use the lowest wattage light required.
- ⊙ Turn off lights when you leave the room.
- ⊙ For outdoor lighting, use solar powered lights, which are inexpensive and environmentally friendly.

## Building and renovating

A well designed home will bring about substantial energy savings, with energy-efficient homes up to 5°C warmer in winter and up to 10°C cooler in summer. What's more, making your new home more efficient does not have to cost more to design and build, and in the long term will deliver substantial savings in energy bills.

- ⊙ The appropriate siting and orientation of your home can make a massive difference to energy bills. Ideally, you want to have your living areas facing north with the long axis of your house facing east-west.
- ⊙ Large windows facing north let the sunshine in during winter and appropriate shading will keep your home cool during summer. Shading should not be needed on windows facing south.
- ⊙ While internal shading is extremely beneficial to insulate the home, external shading is the most effective because it stops radiant heat from passing through the glass.
- ⊙ All bedrooms and utility areas should be located on the south side of your home.
- ⊙ Appropriate zoning of your home should include an open-plan design that can be reduced in size by closing doors. This will minimise the areas that need to be heated or cooled at any one time.
- ⊙ Insulation in the walls and ceilings is the single most important measure that can be implemented to make your house more energy efficient.
- ⊙ All north facing windows should be full length, with zero or very limited windows on the east-west sides and small windows facing south. The total window area of your home should be 25% of the total floor area.
- ⊙ Ventilation and draught proofing are very important because draughts can account for up to 25% of heat losses.
- ⊙ Tiles, slate or any other heat-absorbing hard surfaces are ideal and work well when situated in rooms which have north facing windows.

**By implementing these easy and inexpensive measures, the average household energy bill can be reduced by 10 to 50% as well as significantly reducing the amount of greenhouse gases emitted into the atmosphere. Residential energy consumption accounts for nearly 20% of global greenhouse gas emissions, but by implementing these simple measures to conserve energy, we can all help protect our planet against the threats from climate change.**

**Like peace, environmentalism starts at home.**