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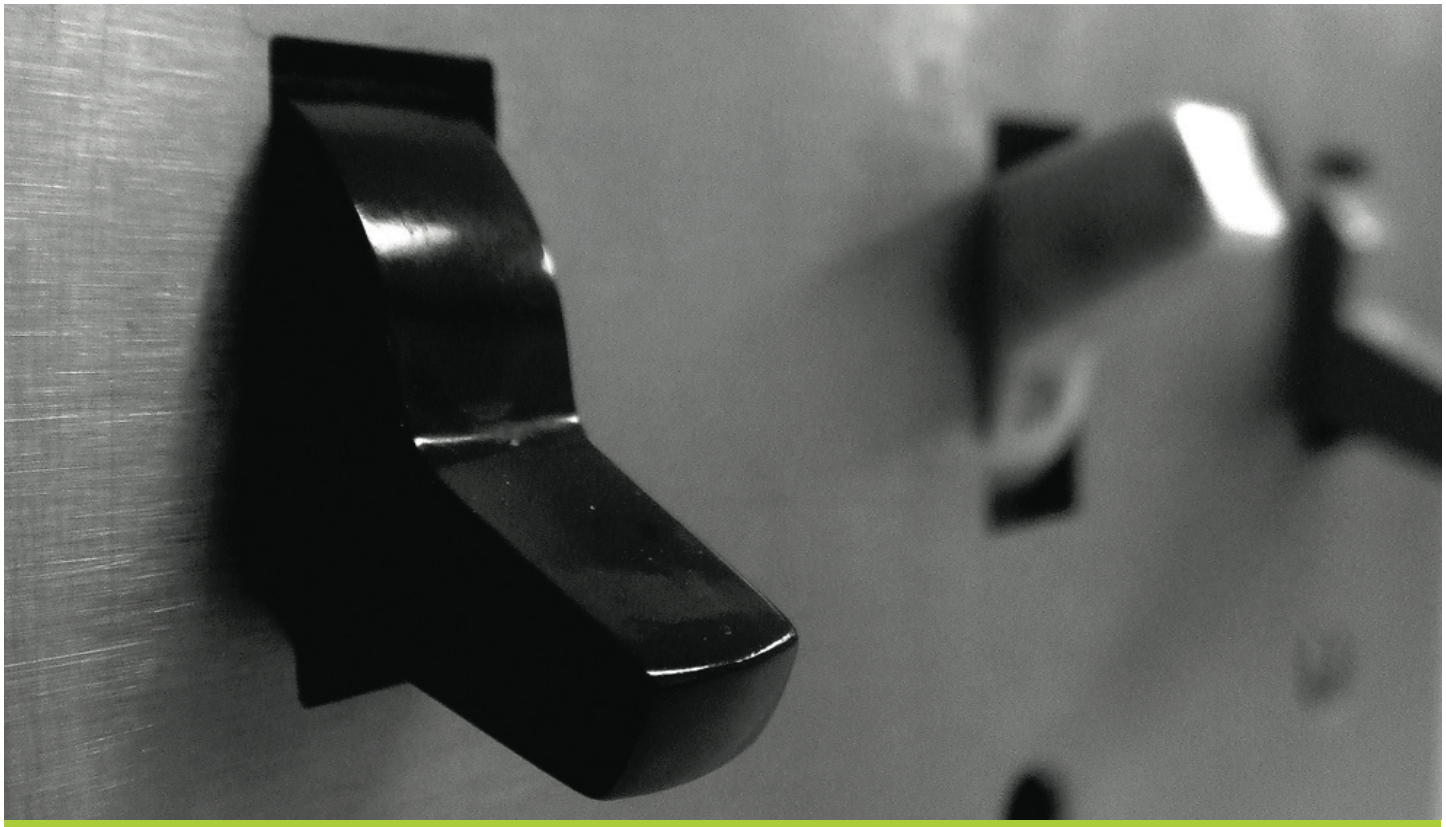
DIY Energy Audit Fact Sheet

September 2011

A publication of the Greener Houses Project - 2011

Greener Houses
Growing Greener Neighbourhoods

jikajika community centre



Identifying energy usage around the home

A great first step towards greening your home is identifying the areas in your home that consume unnecessary amounts of energy. An energy audit of your home can give you important clues about where to start and which things should be a priority to change. Rather than going out and spending money on new green products, first identify where you can save energy, help the environment and start saving money.

Some of the major energy guzzlers in homes include draughts, windows, lack of insulation, lack of shading, inefficient lighting, heating and air conditioning as well as your water heater. Refer to our other Greener Houses fact sheets for information on how to improve each of these in your home. This fact sheet will guide you through the steps of measuring the energy used by the individual appliances in your home, giving you a good overall picture of your energy use.

You will need:

- A power meter. You can borrow one from all Darebin Libraries. Refer to the Greener Houses 'Power Meter Fact Sheet' for instructions.
- A spreadsheet (Windows Excel) or start by using the template on this sheet
- A calculator and your power bill

North East Neighbourhood House Network
Sustainability Fund State Government Victoria
The George Alexander Foundation
Helen Macpherson Smith Trust
Thornbury Women's Neighbourhood House
City of Darebin

Taking Measurements

- You will need to find the tariff that your energy company is charging you per kWh. A kWh is the kilowatts (kW) of energy used by the appliance multiplied by the hours (h) it is on for. If you purchase green energy then your bill may have this tariff split into two sections: ie 18.03 cents per kWh + 5.0 cents per kWh. Add these together to get your total.
- Identify every appliance in your home. List them individually on your spreadsheet. If you have two TV's list them separately.
- Add an extra line for each appliance that has a standby mode option. Add an extra line for the microwave for when it is on, but not heating food (idle).
- When you turn off your PC, if you do not power it off at the wall, add an extra line for PC shut down. You may be surprised to find that in fact your PC draws current if it is still on at the power point.
- Estimate the number of hours per day that this appliance is on in that mode. If this is only minutes then record the value in the third column as a fraction. For example 10 minutes will be 10 ÷ 60 = 0.16
- Remember to divide by 1000 in column 4. This will convert your appliance's usage in W to kW.

Example of spreadsheet that you could create at home. The first two lines are filled in so that you can follow the calculations.

Cost $/kWhr (from power bill) $0.2303

Appliance	**Power (W) Measured with power meter**	**Hours per day estimate**	**kWhrs/day** *W x Hours*	**Cost per day $** *kWhrs/day x 0.2303*	**Cost per year** *Cost per day x 365*
Lounge room					
TV on	125	2	125x 2 ÷ 1000 =0.25	0.25 x 0.2303 = 0.058	$21.17
TV standby mode	7	22	7 x 22÷1000 = 0.154	0.15 x 0.2303 = 0.035	$12.61
DVD on					
DVD standby					
Computer monitor on					
Computermonitor shut down					
Computer on					
Computer shut down					
Printer					
Kitchen					
Microwave on					
Microwave idle					
Fridge					
Freezer					
Toaster	770	0.16	770x 0.16 ÷1000 =0.123	0.123 x 0.2303 =0.028	$10.46
Kettle					
Other					
Total					$44.24

- Calculate the total power usage of your home over a year.
- Remember that your fridge and freezer will use different amounts of energy to run in winter than summer and some of your energy usage will come from appliances that are hardwired such as lights and fans.
- Identify ways to reduce your energy usage, such as switching appliances off at the power point or installing a Future Switch. Set your fridge and freezer to run at the correct temperature. Switch your thermostats to heat at 18oC and your cooling to 24oC

For more information call The North East Neighbourhood House Network on 9457 7900, or Jika Jika Community Centre 9482 5100

Greener Houses Growing Greener Neighbourhoods is transforming five Neighbourhood Houses into ecoliving demonstration centres. It is a unique collaboration involving community volunteers, six Neighbourhood Houses, five local Governments, and tertiary institutions. The project is supported by the Victorian Government Sustainability Fund, managed by Sustainability Victoria and two Charitable Trusts.