



## 13. Energy auditing and using a power meter

**K**nowing how much power different devices and systems use helps you identify unnecessary energy use and improve efficiency.

You can do the auditing yourself, get a technically minded volunteer or hire a qualified energy auditor or electrician who is knowledgeable about energy efficiency.

If a device is plugged in, you can use a simple, inexpensive plug-in meter to record basic consumption data.

Auditors will provide their own meters and they can also assess lighting, heating and cooling options (that aren't plug-in) and assess building performance overall.

Even without auditing your appliances you can still make energy savings by following the suggestions in the other fact sheets in this series.

### Getting started

#### Where can I get a meter?

Some libraries and sustainability centres have energy meters (e.g. PowerMate or Energy Mate) for loan. They are also for sale from online eco stores. If you buy a meter, your centre could loan it out to the local community. A good quality meter generally costs upwards of \$100.

#### How do I use an energy meter?

- Plug your appliance into the energy meter then plug the meter into the wall.
- Measure the consumption in the mode that you usually use it in.
- Insert how many hours you are likely to use it in a day / year. Or you can leave

the appliance plugged into the meter for a day or even a week to get a more accurate record for a particular period.

- If the device has a standby mode, you can also measure this and add it to your chart.
- Insert the cost of energy (you can find this on your bill).
- Note the running cost on your chart.

#### Make some comparisons

Now you can make comparisons with new efficient equipment.

You will find the energy consumption of individual appliances and brands on the ratings agency website:

[http://reg.energyrating.gov.au/comparator/product\\_types/](http://reg.energyrating.gov.au/comparator/product_types/)

You can then work out how long it will take recoup the money you spent buying the appliance with savings on energy costs.

Keep checking your energy bills with a view to replacing older, power hungry appliances with energy efficient ones.



## Hiring an energy auditor

You can get qualified auditors who will take accurate measurements and make recommendations. This could be free or cost anywhere from a few hundred dollars to maybe a thousand or more for complicated sites.

Approach your local government (who may have an auditor to assist you with costs) or online energy advisory sites operating in your state (some of whom offer free audits) for assistance.

## DIY auditing

List all the equipment you have either on a room-by-room basis or grouped by device type such as computers, printers, heaters, etc.

Draw up a chart something like this:

Device	Location / room	Energy consumption in use KWh	Estimated average period of use per day	Standby consumption in Kwh	Cost per year (annual kWh x cost per kWh)	Priority for replacement or standby control

## Further resources

Check out A Greenhouse Around the Corner website:

[www.agreenhouse.net.au/helpful-resources](http://www.agreenhouse.net.au/helpful-resources)

## Related fact sheets

Fact sheet 1: Understanding and managing your bills

Fact sheet 3: The economics of energy efficiency

Fact sheet 7: Choosing appliances and the energy star rating system

Fact sheet 11: Standby power controllers and efficient computer settings

For more fact sheets, go to A Greenhouse Around the Corner website:

[www.agreenhouse.net.au/fact-sheets](http://www.agreenhouse.net.au/fact-sheets)



## CHECK POINTS

- ▶ DIY with an energy meter or hire an auditor.
- ▶ Record the results and calculate the running costs.
- ▶ Tell your story through the media and or social media.

